

**SOCIO-ECONOMIC INFRASTRUCTURE AND TRIBAL  
DEVELOPMENT IN CHAKMA SETTLEMENTS IN MIZORAM**

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**SOCIO-ECONOMIC INFRASTRUCTURE AND TRIBAL  
DEVELOPMENT IN CHAKMA SETTLEMENTS IN MIZORAM**

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**Submitted in partial fulfilment of the requirement of the degree of Master of Philosophy  
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**Declaration**

I, Lokesh Chakma hereby declare that subject matter of this dissertation is the record of work done by me, that the contents of this dissertation did not form bias of the award of any previous degree to me or to do the best of my knowledge to anybody else, and that the dissertation has not been submitted by me for any research degree in any other University/Institute.

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## LIST OF ABBREVIATION

ADA	:	Autonomous District Area
ASEAN	:	Association of Southeast Asian Nations
BPL	:	Below Poverty Line
CADC	:	Chakma Autonomous District Council
CDD	:	Community Driven Development
CHC	:	Community Health-care Centre
DRDA	:	District Rural Development Agency
ECA	:	Europe and Central Asia
GDP	:	Gross Domestic Product
GNP	:	Gross National Product
GOI	:	Government of India
HQ	:	Head-Quarter
IRDA	:	Integrated Rural Development Agency
ITDP	:	Integrated Tribal Development Projects
JNNURM	:	Jawaharlal Nehru National Urban Renewal Mission
LAD	:	Local Administration Department
LADC	:	Lai Autonomous District Council
LPG	:	Liberalization Privatization and Globalization.
LPG	:	Liquid Petroleum Gas
MADC	:	Mara Autonomous District Council
MDG	:	Millennium Development Goal
NADA	:	Non-Autonomous District Area
NER	:	North Eastern Region
OECD	:	Organization for Economic Co-operation and Development
PE	:	Private Equity
PESA	:	Panchayats (Extension to Scheduled Areas) Act
PHC	:	Primary Health-care Centre
PPP	:	Public Private Partnership
PRA	:	Participatory rural appraisal
SAR	:	South Asian Region
SPSS	:	Statistical Package for the Social Sciences
ST	:	Scheduled Tribe

TDP : Tribal Development Programme  
TSP : Tribal Sub Plan  
UDHR : Universal Declaration of Human Rights  
VCP : Village Council President  
YCA : Young Chakma Association

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# **CHAPTER I**

## **INTRODUCTION**

## CHAPTER I

### INTRODUCTION

The present study attempts to assess the impact of socio-economic infrastructure on tribal development in the context of Chakma villages in Mizoram.

#### 1.1. Infrastructure Development

Infrastructure can be construed as the foundation for the world system where all the social, organizational and economic related activities have direct and indirect part to play. It is a pre-requisite for any society, nation or region to develop. Infrastructure is a critical driver of economic development and can significantly raise the living standards of people across regions. Infrastructure development is a key pathway to poverty reduction. Infrastructure covers a wide spectrum of activities like transport, power, water supply, education and health which are the essential ingredients for social, economic and financial development of a country or region. Infrastructure stock can be divided into economic or physical infrastructure and social infrastructure. Former includes services such as electricity, transport, roads, water system, communications, irrigation etc., while latter includes education and health facilities (World Development Report, 1994). Other forms of infrastructure may be identified as institutional infrastructure as banking and civil administration. A country's level of human and economic development is also closely related to its levels of achievement in physical and social infrastructure. A review of infrastructure needs in the developing world suggests that the challenge is immense. The world economic forum estimates that meeting global infrastructure needs will require investment of \$3.7 trillion annually, but the impact of this gap is best framed in human terms. There is also much debate on which infrastructure should be given priority. So, Estache and Garsous (2011) suggested a way of organizing the assessment of the drivers of infrastructure priorities should depend on the development stage of the countries covered by the sample analysed, the time period over which the impact is assessed, and the type of infrastructure.

The South Asia Region (SAR) continues to suffer from a combination of insufficient economic growth, slow urbanization, and huge infrastructure gaps that together could jeopardize future progress despite rapid growth and poverty reduction policies and programmes. It is also home to the largest pool of individuals living under the poverty line of any region, coupled with some of the fastest demographic growth rates of any region. Between 1990 and 2010, the number of people living on less than US\$1.25 a day in South

Asia decreased by only 18 percent, while the population grew by 42 percent (World Bank, 2013).

The Asian Development Bank Institute specified four reasons why infrastructure can generate a higher cycle of higher demand, productivity and growth, consistent with ASEAN's long-term development goal:

1. Infrastructure plays a significant role in promoting and sustaining economic growth in the region;
2. Infrastructure development is necessary to accelerate economic integration within the region, particularly in the area of trade and investment;
3. Addressing inequalities in infrastructure development is critical to the wider objective of reducing development gaps among ASEAN countries and income inequality and poverty within each country; and
4. Infrastructure development is necessary to improve resource sharing and efficiency in the region to provide basic needs, such as water and electricity.

The infrastructure sector in India has evolved from purely Government funded projects to newer business models involving partial or complete ownership of the private sector. There has been a growing emphasis on infrastructure development in the post liberalization era. Despite second fastest growing economy in the world infrastructure inadequacy both in urban and rural areas has been a major constraint in India's growth. There are several issues for the delay of infrastructure development: funding constraints, land acquisition issues, delays related to identification and award of projects, and shortage of skilled manpower (Aggarwal, 2015). There is also a gap between existing and required infrastructure. So, to bridge this gap 'Traditional Public procurement' or 'Public Private Partnerships (PPPs)' or 'Privatisation' can be an option (Nair, 2012). At present the economic growth rate of India is in favourable condition. According to Global Investment Bank estimates India will be the third largest economy in the world by 2035. The main problem is the poor quality of infrastructure facilities. To enhance the growth of infrastructure development in the country, the GOI initiated 'Bharat Nirman' programme to develop rural infrastructure at an estimated cost of Rs.1,74,000 crore (approx. US\$40 billion), Jawaharlal Nehru National Urban Renewal Mission (JNNURM) to improve the quality of life and infrastructure in the cities at an estimate of Rs.100,000 crore (approx. US\$20 billion).

## 1.2. Tribal Development in India

India has been called ‘a country of villages’ as the majority of its population lives in villages. According to 2001 census 72.22 per cent of the Indian population live in rural areas. Most of the poor population are in the rural areas, and the growth of farm productivity and non-farm rural employment is linked closely to infrastructure provisions. In India all the tribal population comes under the ‘ST’ (scheduled tribes) of the Indian Constitution. Scheduled Tribes constitute 8 per cent of the total population of India out of which 1.8 million are identified as primitive tribal groups. Majority of the tribal population are in the most rural backward region of the area. These tribal regions lack most of the basic infrastructure facilities require for their social and economic development. In fact 52 percent of tribal population is below poverty line and 54 percent tribal have no access to economic assets such as communication technology and transport (Ganganna, 2016). Therefore, stress has to be laid on infrastructure development essential for promotion of rural enterprise which would ultimately help in creating employment and increase in national output. Infrastructure services that help poor also contribute to environment sustainability (Aggarwal, 2003).

Jawaharlal Nehru, first Prime Minister of India formulated the following five principles for the policy to be pursued for the development and integration of tribal people in India:

1. People should develop along the lines of their own genius, and the imposition of alien values should be avoided.
2. Tribal rights in land and forest should be respected.
3. Teams of tribals should be trained in the work of administration and development.
4. Tribal areas should not be over administered or overwhelmed with a multiplicity of schemes.
5. Results should be judged not by statistics or the amount of money spent, but by the human character that is evolved.

In India, efforts were made to promote infrastructure development in the post-independence period. The newly formed government adopted the five year plan formula strategy for the economic and social development of the country. The main objectives of the five year plan was to have a high rate of growth with a view to improvement in standard of living, economic self-reliance, social justice, modernization of the economy and economic stability. The first five year plan was initiated in 1951 where by its primary goal is to develop the agriculture sector of the country. But it was only in the fifth five year plan (1974) through the initiation of Tribal Sub Plan (TSP) strategy that the tribal regions were given priorities



through Integrated Tribal Development Projects (ITDP). Tribal development in India has been based on two dimensions: Promotion of the developmental programmes through planned effort and protection of the interests of the scheduled tribes through constitutional, legal and administrative support. Separate ministry of tribal affairs was established in the year 1999 for overall policy, planning and coordination of programmes of development for the scheduled tribes. It was only after the reforms of 1991 that high priorities were accorded to infrastructure development in India. Private sector investment in infrastructure in India, which was about 20% in the 10th Five Year Plan (2002-2007), increased to about 30% in the 11th Five Year Plan (2007-2012), and is expected to touch 50% during the 12th Five Year Plan (2012-2017). Despite several central and state government attempt schemes launched for tribal development it is found that there are inter-state and intra-state regional disparities in terms of development due to lack of infrastructure facilities. Most of the infrastructure services in India are managed by centrally monopolistic public enterprises or government department. It is also one of the major causal factors of lopsided development in the country.

### **1.3. North-Eastern Region (NER): An Overview**

Tribes in India differ from one tribe to another in terms of their habitat, level of development, modes of production, exposure to the wider world, traditional values, customs, beliefs, etc. NER comprises of eight States namely Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, Tripura, and Sikkim. According to 1991 census, the rural sub system of the North-Eastern Region (NER) economy consists of some 35 thousand villages inhabited by over 32 million people who constitute about 85 per cent of the total population in the region and constitute 3.7 per cent of the total population. The main North-Eastern Region (NER) economy constitutes cultivators & agricultural labourers. The tribes of this region are not homogeneous like any other tribe in the world except they can only be categorised into hill dwelling and valley dwelling tribes. The villages in NER are uniquely different from the other villages of the country while maintaining few commonalities among themselves. The region has been trapped in the vicious circle of socio-political instability and underdevelopment (Rajput, 2004). Most parts of this region does not have the basic social and economic infrastructure facilities. The existing infrastructures are as well poor which discourages investors. There has been rapid urbanization in the North-Eastern Region (Census of India 1951-2001). But the economic development are concentrated only in some specific locations which led to regional disparities between different States as well within the State. The main benefactors are the tribes with larger population which has resulted in wide

developmental gap between the majority tribes and the minority tribes creating socio-political uncertainties in the region.

#### **1.4. The Chakma Tribe: An Overview**

There are conflicting theories regarding the origin and history of the Chakma tribe due to lack of written historical records. The first historical written reference to Chakma settlements in the Chittagong Hill Tracts (CHT) dates right back to around 1550 AD. The Portuguese explorer and cartographer, Lavanha, indicated on the earliest surviving map of Bengal that a tribe known as Chakma was living in a settlement of the Karnafuli River. The Chakmas are Indo-Aryan dialectically and physiognomical characteristic features indicates to Tibeto-Burman group of mongoloid race. They traditionally followed monarchical system of administration. Majority of the Chakma population observes doctrine of Theravada Buddhist religion. The main festivals which they celebrate are: Buddha Purnima, Kathina Chivara Dana, Bijhu, and Alhpaloni. They also have their own alphabetical script, customary laws, traditional dance form, and music.

The Chakma tribe has been the victim of three tragedies which almost decimated their history, socio-economic, and cultural heritage. Firstly, rearrangement of the boundary of Chakma Kingdom of Chittagong Hill Tracts (Chadigang). In 1895 a part of the area with significant Chakma population was separated out of the Chittagong Hill Tracts of Bengal to the Lushai Hill District of Assam for administrative convenience by the British. This is well attested with the Government proclamation No.1697-E, dated the 6th September, 1895 (Hoque, 2013). Secondly, the Chakma tribe were one of worst victims of partition of India which divided the Chakma populations into two countries, i.e. India and East Pakistan (now Bangladesh). Finally, Chakmas are also amongst the first victim of development induced displacement in South-Asia. The completion of Kaptai Reservoir in Chittagong Hill Tract (CHT) in early 1961 had turned some 100,000 people into 'environmental refugee' (Singh, 2010).

At present Chakma are residing in Chittagong Hill Tracts in Bangladesh; Mizoram, Tripura, Arunachal Pradesh and Assam in India and Burma. Mizoram is situated on the North-East end of India, lying between 21.58 to 24.35 degree north latitude and 92.15 to 93.29 degree east longitude. Mizoram was known as Lushai Hill District during the British period. The Chakmas in Mizoram are the second largest population after the Lushai tribe inhabiting in the south-western part. The total Chakma population of Mizoram is estimated to

be more than 100,000. In Mizoram also the Chakma settlements are spread in three districts viz. Lawngtlai, Lunglei and Mamit. They are also one of the most backward and disadvantaged group in all the regions.

### **1.5. Socio-Economic and Infrastructure Development in Mizoram**

The socio-economic development of Mizoram is better than the other North-Eastern States in many respects. Mizoram ranks first among the North-Eastern States getting 82 per cent followed by Assam with 77.7 percent, according to Eleventh Finance Commission's Index of Economic and Social Infrastructure. All means of transportation system are poor in quality. There is only a small meter-gauge railway link up to Bairabi. National Highway 54 is the only main road that connects the State with rest of the country via Silchar, and a limited air service which connects Aizawl with Imphal, Guwahati and Kolkata. The roads within the state are in a sorrowful state. During the monsoon season some villages totally become disconnected from rest of the State's towns and district head-quarters. All the villages are yet to be electrified due to shortage of electricity supply in the state. The total population is 10.75 lakh according to 2011 census report of India. Any Mizo (Lushai) tribes have the highest population constituting 77 percent followed by the Chakma tribe. They constitute about 8.5 percent of total Scheduled Tribe population. This is followed by Lai, Mara and other tribes. In literacy Mizo (Lushai) tribes is on the top having 95.6 per cent and Chakma has registered the lowest literacy of 45.3 percent (Census of India 2001). Despite being the second largest population majority of the Chakma villages lack the basic infrastructure facilities and services required for their social and economic development.

In 1972, under the provision of sixth schedule to the constitution of India three Autonomous District Councils (ADC) were created which gave them some legislative and executive powers including some regulatory authority subject to State control viz. Chakma Autonomous District Council (CADC), Lai Autonomous District Council (LADC), and Mara Autonomous District Council (MADC). But, all the ADCs focus entirely on the district tier, and have no democratic tier below the district level. All receipts/moneys of the ADC are credited to the Consolidated Fund of the State, so it totally depends on the State Government for its funds/finances. Lack of financial autonomy takes away the autonomous character of the ADC. Therefore, there are many obstacles in implementation of any developmental programmes. Most of the developmental programmes are used for gaining political mileage in these areas. People's participation is the core value of a society in any democratic framework for overall socio-economic development. It is a collective and continuous effort

by the people themselves in setting goals, assembling resources and taking actions for improving their living conditions (Prasad, 2003). But it is observed that there has been minimal community participation at the State level from the Chakma tribesmen. Majority of the Chakma villages lies in these three different regions: Mamit District, Lunglei District and Lawngtlai District. CADC is the least developed among the three ADCs in Mizoram with poor level infrastructure facilities. The Chakma villages are the most backward in terms of development physical or social infrastructure facilities.

## **1.6. Overview of Literature**

As infrastructure development is the focus of development in rural and urban areas across the globe, there is a copious literature on Infrastructure and Development in the global context (see Sapkota 2014, Calderón and Servén, 2008; Aschauer, 1989; Williamson, 1965, 1968), national (Ghosh and De 1998, Barro 1990; Futagami, Morita, and Shibata 1993), regional (see Wanmali and Islam, 1995) and local contexts. Impacts of infrastructure development on poverty reduction at micro level (Van de Walle 1996; Lokshin and Yemtsov 2005; Jalan and Ravallion 2003; Jacoby 2000; Gibson and Rozelle 2003) have also been studied widely. Relationship between infrastructure and inequality has also been assessed at micro level (Bajar and Rajeev 2015; Tewari, 1983, 1984). In various sectors of development also studies have assessed the impact infrastructure. Infrastructure and Rural Development, Infrastructure and Urban Development Infrastructure and Tribal Development have been probed into. There are Cross sectional (Van de Walle 1996; Lokshin and Yemtsov 2005; Jalan and Ravallion 2003; Jacoby 2000; Gibson and Rozelle 2003), Time Series (Sanchez-Robles, 1998; Gosh and De, 2004), Panel Data (see Sapkota 2014; Calderón and Servén, 2008; Latif 2002) and Experimental Studies on infrastructure and development.

## **1.7. Statement of the Problem**

In this context, the present study probes into nature of infrastructure development and its bearing on development in the Chakma villages and households in Mizoram. The present study is an attempt to understand the significance of infrastructure facilities for tribal development in Mizoram in the context of backward districts and tribal villages and households. It focuses on the bearing of economic and social infrastructure on the development in Chakma villages. Understand the perceptions and experiences of people on infrastructure and development. Infrastructure development is assessed in terms of its physical and social components while development is probed in terms of economic and social aspects. Therefore, key area of this study will focus on the availability of both physical and

social infrastructure facilities, its impact on the development of the Chakma villages, and the infrastructural development gap between the Chakma villages and other villages in Mizoram.

### **1.8. Chapter Scheme**

The present study is presented into the following five chapters.

1. Introduction
2. Review of Literature
3. Methodology
4. Results and Discussions
5. Conclusion and Suggestions

## **CHAPTER II**

### **REVIEW OF LITERATURE**

## **CHAPTER II**

### **REVIEW OF LITERATURE**

This chapter is an attempt to present the review of literature on socio-economic infrastructure and tribal development. The literature has been categorised into four and one section each presents the review of them viz., studies on Tribal development in India, Infrastructure Development and its Impact on Socio-Economic Development, Infrastructure Development and Regional Disparities, and Infrastructure Development in North-East Region of India.

#### **2.1. Studies on Tribal Development in India**

The Constitutional Provisions of Tribal has given more than 20 articles on the redressed and up-liftmen of underprivileged with policies on positive discrimination and affirmative action with reference to S.T. These are some the following provisions:

1. Article 14 confers equal rights and opportunities to all.
2. Article 15 prohibits discrimination against any citizen on the grounds of sex, religion, race, caste etc.
3. Article 15 (4) States to make special provisions for advancement of any socially educationally backward classes.
4. Article 16 (4) empowers the state to make provisions for reservation in appointments or posts in favour of any backward class of citizens, which in the opinion of state, is not adequately represented.
5. Article 46 state to promote with special cares the educational and economic interests of the weaker section, especially the ST and protects the social injustice and all form of exploitation.
6. Article 275 grant-in aid for promoting the welfare of ST and raising the level of administration.
7. Article 330 - Seats shall be reserved in the House of the People for -Article 332 Reservation of seats for Scheduled Castes and Scheduled Tribes in the Legislative Assemblies of the States.
8. Article 244(1) tribal welfare communities to be setup for the welfare of the tribes.
9. Article 22(2) 73rd and 74th amendments - to ensure effective participation of tribal in the process of planning and decision making.
10. Extension to scheduled Areas Act 1996. Amendments of Constitution are extended to the Scheduled Areas through Panchayats.

Mathew (2013) indicated that it is universally accepted that despite considerable overt attention, the tribal areas and the tribal people in our country lag woefully behind others in development and the tribals continue to be among the weakest and the most exploited section of the society.

Nayak (2010) in the article 'the rise and fall of tribal development in Orissa' held that during 1970s TSP was successful in alleviating many problems of tribal in the state but it phased out its enthusiasm in the 1990s due to introduction of multiple programmes and lack of skilled personnel. It also widened the gap between 'have' and 'have-not' among the tribals. The existing infrastructures remain unused serving no purpose anymore. So, his study suggests that there should be a comprehensive redesigning of tribal development policy as the nature of the tribal problems has also changed with the phase of economic LPG.

Goswami (1984) distinguished the tribes of NER into hill-dwelling and valley-dwelling with distinct economic problems. According to him due to the hilly geographical location this region lacks many infrastructure facilities and services. There is also a fear among the tribes of losing their identity to the non-tribal population. He suggested that there should be specific strategy of tribal development for the NER with clear definitions of its developmental goals.

Kulkarni (1980) studied on the problems of the tribal population in rural Maharashtra concentrated on the rural areas of Dhule, Thana, Nasik and Chandrapur districts. Most of the tribals are subsistence cultivators and hold only a small area of land. He observed that most of the tribal development strategies do not benefit the tribals but instead it further increase their problems such as land alienation, exploitation and poverty. He found that the Tribal-sub plan is poorly implemented. He suggested that effective implementation of the Employment Guarantee Scheme could improve the conditions of tribal agricultural labourers and small farmers.

Vaid, Kumar and Kumar (2011) have observed that the adoption of single consolidated demand in the Annual Budget and introduction of single line administration in the ITDPs have contributed to the socio economic development of tribal community of Himachal Pradesh. It also received special consideration of the State Government primarily on the account of their strategic location and relative economic backwardness. But the tribals face the problem of land alienation from the non-tribals. So, they suggested that effective policy should be formulated to prevent the problem of land alienation, empowerment of rural tribal youths with skills, and review of National Forest Policy and Forest (Conservation) Act 1980.



A study by the Planning Commission (2003) probed into the impact of the TSP implementation on improving the socio-economic condition of the tribal people in the States of Assam and Tamil Nadu. It reported that the TSP flow is notional; the programmes are not specifically in harmony with the actual needs of the tribals. Proper inter-sectoral prioritization is also not being attempted. Analysing the data, it was also found that the most important causes for TSP failure are the casual approach, lack of sincerity in implementation and absence of involvement of tribal people. Therefore, the study suggested that the implementation of PESA 1996 in both the States could be a great source and motivation to improve implementation of TSP in a decentralized tribal participatory mode. It is also found that tribes in India lack basic nutritional needs as majority of them are below the poverty line. Therefore the study suggested that the National Institute of Nutrition should undertake regular Nutrition surveillance of these areas with particular reference to the vulnerable areas.

World Bank (2013) working paper entitled '*Jharkhand tribal development plan*' found that most of the tribal villages are located in left-wing extreme areas where accessibility is an issue. They are socially and economically disadvantaged group compared to the other groups. There is insignificant participation from the women in decision making. The TDP did not fetch good results among the tribals due to absence of disaggregated data for the Scheduled Areas, and gap in development among tribes. Therefore, the strategy should follow the principles of Community Driven Development (CDD): Autonomy, Decentralization, Self selection and demand driven, Inclusion and equity, Participation, Gender main streaming, Gender main streaming, and Transparency and accountability.

## **2.2. Studies on Infrastructure and Socio-Economic Development**

Kessides (World Bank, 1997) identified three ways in which infrastructure contributes to the economic growth of a country. Firstly, infrastructures like road, water, telecommunications and power raise the productivity and increase the return on investment. Secondly, it leads to economic diversification and development of new market and linking all the different parts of the country. Finally, social infrastructures like Schools and hospitals help in the development of human capital.

Estache and Garsous (2012) studied the impact of infrastructure on growth in developing countries observed that across regions; energy is where the largest infrastructure gaps are found (around 40-60% of the investment needs, depending on the country) followed transport except in ECA and South Asia where the transport needs are the highest. It was also observed that access to physical infrastructure does not drive GDP, growth or the social returns alone.

Robles (1993) suggested that for any country or region to develop economically, the governmental activity must focus on the public investment in terms of infrastructure. It has to develop the social infrastructures like schools, health facilities, recreational facilities, etc. Using Standard Growth Model it is found that greater stock of public capital enhances economic growth. There is a significant increase in economic growth with increase in infrastructure development but it may not be similar in all parts of the world.

Esfahani and Ramirez (2003) developed a structural growth model for understanding the mutual effects of infrastructure and the rest of the economy on each other in their study. Using cross country data from Africa, South Asia and China, Latin America, East Asia and others found that impact on infrastructure development has a substantial growth effect on GDP. But it also requires great institutional capabilities as well to lend credibility and effectiveness to government policy which plays important roles in the development process through infrastructure growth. In simple terms infrastructure investment alone cannot be the causal factor for better economic growth but it also requires better reformation in organizational and institutional functions.

Calderon and Serven (2008) attempted to provide an empirical assessment of the impact of Infrastructure and economic development in Sub-Saharan Africa. The paper utilized a comparative cross-regional perspective to place Africa's experience in the international context. The samples were drawn from an updated data set of infrastructure quantity and quality indicators covering over 100 countries and spanning the years 1960-2005. The results found evidence that by an increase in the volume of infrastructure stocks and an improved quality of infrastructure services has a positive impact on long-run growth and a negative impact on income inequality.

Seneviratne and Sun (2013) utilizing regression analysis covering 76 advanced and emerging market economies during the period of 1980-2010 to examine the impact of infrastructure and investment on income distribution observed that better infrastructure, both in quantity and quality, improves income distribution and did not find investment promotes income equality.

Datta and Agarwal (2004) held that the results from recent analysis of economic growth in OECD indicates that telecommunications infrastructure plays a positive and significant role in economic growth using a similar (but not identical) data set as Roller and Waverman, which includes 22 OECD countries. A dynamic panel data method is used for estimation, which corrects for omitted variables bias of single equation cross-section regression.

Andrés, Biller and Dappe (2013) highlighted the barriers in infrastructure development in their study, in South Asia some infrastructure services (such as piped water) are too costly to be implemented sustainably without any cost-recovery element, and therefore will fail in the long run unless this is present. While in Africa difficulties raising tariffs to cost-recovery levels and collecting bills from customers have often led to contract cancellation in the water and electricity sectors.

Zahra, Azim and Mahmood (2009) using panel data representing twenty four countries comprising low income, middle income and high income observed that providing an efficient and appropriate telecommunications infrastructure is significant for fostering economic growth, as well as reducing regional disparity and shrinking digital divide. The study also found that in most of developing countries, the telecom sector is facing a number of challenges, for example: The first and foremost challenge which is faced by developing especially low income countries is the low tele-density especially in the rural areas of these countries, the steps to overcome this problem are insignificant.

Javediqbal and Nadeem (2006) attempted to examine the causal relationship among composite indicators for real, monetary/financial, social and infrastructure development in Pakistan. Using time series data the authors found that a long-run relationship among social, real, monetary and infrastructure activities. The study also applied Granger Causality test in a Vector Error Correction model and concludes that social development is caused by real economic development but not vice versa, which is indicative of 'trickle-down' development policies.

Jan, Chani, Pervaiz and Chaudhary (2012) investigated the relationship between physical infrastructure and economic development of Pakistan. The empirical analysis shows that co-integration exists among the variables of economic development, employed labour force, gross private fixed capital formation and physical infrastructure. This confirms the importance of physical infrastructure for the economic development of Pakistan.

Latif (2003) studied the effects of developing roads and markets on income, consumption and poverty situation by using panel data, which allows both 'with- without' and 'before-after' comparisons in Bangladesh. The findings revealed that development of transport and trading infrastructures has independent positive influence on income, consumption and poverty reduction. With the rise of income the people tend to spend their expenditure on non-food items more.

### **2.3. Studies on Infrastructure Development and Regional Disparities**

Kanbur & Rauniar (2010) attempted to define inclusive development and assessed its relationship with infrastructure development with special focus with rural areas. The study found that rural areas lag in their MDG achievements and that infrastructure is causally linked to improvements in these achievements, investment in rural infrastructure emerges as a key intervention in support of inclusive development. They have suggested that these interventions need to be targeted to poor areas, pay attention to their utilization by the poor and the disadvantaged and have built in designs of rigorous evaluation so that lessons can be learned for future interventions.

Aarebrot (1974) studied the regional differences in political mobilization in Norway from 1868 to 1897 shows that with the advancement of industrial revolution many political and economical structural adjustments occurred in Norway. This resulted in the development of many modern social and physical infrastructures but it created regional disparity between the centre and the periphery regions. Circuit schools were upgraded to permanent schools and higher level of education were priorities. There was subsequent transition of agriculture economy to the industrial economy. The smaller cities became more active in political mobilization whereas the larger and rural areas were lagging behind them.

Low (2008) studied the regional disparities in China and observed that when the country was facing famine, drought and economic slowdown but after the infrastructure management was done through a planned economy mainly focused on corporation than privatization during 1990s. It put thrust its energy and transport sector through foreign investment and loan from international institutions. It resulted in creation of a large regional disparity in terms of economic development in the region.

Wang (2007) developed a theoretical model of social infrastructure and economic development model based on Benhabib and Rustichini (1996) utilizing the various literature on the economic development of China. The assessment provided an example that a ruling social group might relegate the political rights to the other social groups in order to pursue its own interest, which might actually maximize the economic growth rate as well. A minor change in the distribution of productivities among different social groups might cause drastic variation in the social structure, which can potentially determine the attitudes of different social groups towards the adoption of any new technologies.

Dayley (1996) studied the structural adjustment in Thailand found that there is rapid growth of GNP is mainly due to the development of the infrastructure services. But there

exist a wide spread income gap and regional disparity in economic development. The study concluded that marginalization and infrastructure development have symbiotic relationship. Macro and micro political-economic mechanisms exist in Thailand that influences this symbiosis.

Aggarwal (2015) in his paper 'Infrastructure in India: Challenges and the way ahead' described that in the last one and a half decades the development of physical infrastructure in India has been mixed and uneven, and the quality do not meet the world standards. The formal schooling per adult, elementary education, and high school education are considerably lower than the other emerging economies. There are also shortage of health care facilities. Therefore, the paper argued that only good social and physical infrastructure supplemented with good governance can bring socio-economic growth in the country.

Thillairajan and Menon (2014) studied the relation between Private equity (PE) and infrastructure development from India. They show that firms that have received PE investment have superior performance compared with firms that have not done have. Regional analysis shows that the East had the lowest number of deals, which can be attributed to the moderate economic and industrial activity in the region. The South accounted for the highest number followed by west and north of PE investment deals. They have identified that corruption is also a major obstacle in the PE investors. PE has been emerging as a major source for financing infrastructure projects.

Ghosh (2011) presented a quantitative analysis of the relationship between development of physical infrastructure and the growth of secondary sector at the state level. Three industrially developed and three industrially least developed States of the Indian Union are identified for the study. Applying regression technique using factor score, the results show that for all the states, physical infrastructure has a positive impact on output from secondary sector. It also found that some States will have a greater impact with increase in infrastructure while some have reached their threshold point, example: Maharashtra, and Bihar may be lacking the social and political mind-set.

Ghosh and De (1998) in the study 'Role of Infrastructure in Regional Development: A Study over the Plan Period' found that the impact of public investment and physical infrastructure on both private investment behaviour and regional economic development has been found to be highly significant and positive.

Ghosh and De (2004) utilizing the data from economic survey of India, Statistical Abstract of India and Transport statistics of India concluded in their study that inter-state

disparities in physical, social and financial infrastructure services have been increasing at an alarming rate. Physical and social infrastructure facilities have been proved to be a significant factor to determine the inter-state disparity.

#### **2.4. Studies on Infrastructure Development and North-East Region of India**

Dutta (2003) observed that due to globalization there is rapid socio-economic transformation in the Indian economy but fail to address the problems of regional disparity. The study also reveals that majority of the North-Eastern Region (NER) States are far behind from other States of Indian Union in providing the basic amenities of life such as health, education, safe drinking water, food security, banking facilities, communication, etc. are concerned.

Baruah and Millo (2014) attempted a study on the factors affecting development in the North Eastern States of India. This study is a descriptive research based on both primary and secondary data. The findings reveals that the respondents perceived about lack of development in Arunachal Pradesh were corruption, lack of awareness of the various government schemes and problems related to their implementation. They suggested that sectors like education and rural development should be prioritized for overall development of the State.

Dutta and Pradhan (2004) have pointed out that Government of India should initiate special programmes for North-Eastern Region States to improve infrastructure as well as to ensure food and nutritional security to the poor by improving the Public Distribution System.

Hooda (1997) attempted to study the role infrastructure in the development process of rural areas of the North-Eastern Region States of India based on the published and unpublished secondary sources of statistical data. He suggested that for rural development, there should be mutual cooperation between the policy makers and the rural people in implementing the programmes and policy. There should also be equal investment in economic and social sectors.

Das (2004) found that due to lack of infrastructure facilities in the rural areas led to the failure of most of the rural development schemes from IRDP in Mizoram. The study also found that politically motivated postings and transfer of DRDA officials is a major obstacle in the success of IRDP.

Singha (2007) in the paper *Village Development in North-East* differentiated the tribal villages, particularly from North-East Region is quite different from other villages in the country. They have some uniqueness in their structure, socially, culturally, and economically.

At the same time villages have something in common too. In a case study of Mizoram's infrastructure development conducted by Singha and Kabra (2007) highlighted these as major obstacles: Transport and Communication, Power, Problem of landslides, Long Rainy Season, Hilly terrain, and problem of finance. The study have also found that money allocated for infrastructure development by the Government of India to Mizoram is spent primarily on meeting the expenditure on salaries, office expenses and other unproductive expenses of the employees.

In spite of existence of copious literature on the bearing of physical and economic infrastructure development on social and economic development across the globe a few research gaps could be observed.

First research gap is concerned with conceptualisation and Operationalisation of infrastructure and development. Most studies focus mainly the economic or physical dimensions of infrastructure development while a very few deal with social infrastructure. Further, development has also been probed mostly in terms of economic dimension and indicators while those assessing the social dimension are a few. Understanding development and infrastructure as multidimensional process will provide better and deeper insights for policy making and social work intervention.

The second research gap is related to the methodological orientation. By and large studies probing the relationship between infrastructure and development are quantitative in nature while there is rarely any study which deal with the qualitative aspect of the relationship between infrastructure and development. Use of qualitative, participatory methods will be helpful in understanding the micro level social dynamics of the relationship between infrastructure and development. Space related methods of PRA will help to understand the infrastructure development at village level and how households utilize them.

The third research gap is with reference to locus of research. Most of the studies on infrastructure and development relationship have been conducted at national, state, district levels. But studies on Infrastructure and development at household at village and household levels are fewer. The studies at village and household levels are essential for understanding the perspectives of the people who were left over in wider process of development.

The fourth research gap is concerned with the substantive area of research. There are a few studies on the role of infrastructure in development in North East Region. There are a few studies on the relationship between infrastructure and tribal development in country. They are very few in the context of tribes like Chakma who constitute a minority in the

context of the state. In fact, the various aspects of development of minority tribes have not been adequately probed into. District autonomy has been endowed to the minority tribes like Chakma under the sixth schedule of constitution of India. However, there are no studies on the impact of autonomy on the infrastructure or development of people in the autonomous council areas.

The present study attempts to fill these gaps in the literature in the context of Chakma villages in Mizoram at village and household levels. In the present chapter, an attempt has been made to present a review of literature on infrastructure and tribal development with intent to find research gaps. In the next chapter the methodology of is presented to address these research gaps.



## **CHAPTER III**

## **METHODOLOGY**

## **CHAPTER III**

### **METHODOLOGY**

In this chapter an attempt has been made to present a comprehensive account of the setting of the present study and the methodology of the present study. The present chapter has been presented into two major sections viz. the setting and research design.

#### **3.1. The Setting: Representing Village and Households**

The selection of villages were done from three districts viz. Lawngtlai, Mamit and Lunglei as most of the Chakma villages are located in these districts. For collection of secondary data, Abstract of Village Survey (2011-12) published by Local Administration Department, Government of Mizoram was utilized. For this purpose, 340 villages were identified which formed the total population which were further categorised into four types of villages with 104 Chakma villages, 184 Mizo villages, 28 Bru villages and 26 Mix villages. These representing villages are then divided according to sixth-schedule area and non-sixth-schedule area (see Table 4.1).

Pre-tested structured household interview schedule using computer aided software (CS-Pro) was utilized for primary data collection. Two villages were identified according to autonomous area and non-autonomous area, i.e. Baganpara from the former area and Silkur from the later area. Participatory research methods of social map and resource map were used in both the villages. The main participants in the Participatory Rural Appraisal (PRA) exercise are from Young Chakma Association (YCA) and Village Council (VC) members of the villages (see Fig. 3.1 and 3.3). Seasonal calendar diagram was also used in the Baganpara village (see Fig.3.2). Group discussions were conducted in Silkur village regarding the different infrastructural needs for the village. Most of the discussions were in small tea shops with community leaders, elders, YCA members and local people.

##### **3.1.1. Autonomous Area: Baganpara Village**

Baganpara village is located within Chakma Autonomous District Council (CADC) in Lawngtlai district. It was established in the year 1986. It is located near the bank of river Tuichawng about 3 Km from Kamalanagar which is the head-quarter of CADC, a major economic zone in the area and sub-headquarter of Lawngtlai. Most of the households in this are from the BPL background. But they have a better occupational opportunity as it is near the economic zone. The village lack many basic physical and social infrastructural facilities (see Table 4.2.11 and Table 4.2.12). Majority of the village household members does not

have proper level of education (see Table 4.2.10). The main sources of income are from Jhum cultivation and daily wage labour (see Fig.3.2).

**Table 3.1 Demographic Profile of Baganpara Village**

Name of Village	:	Baganpara		
Year of Establishment	:	1986		
No. of Households	:	198		
Population	:	810	Male	: 411
	:		Female	: 399
No. of Schools	:	1		
No. of Buddhist Temples	:	1		
No. of Churches	:	0		
No. of Water Reservoirs	:	1		
No. of transformers	:	1		
No. of Anganwadi Centers	:	2		
No. of Playgrounds	:	1		
No of Community Halls	:	0		
No of Health Centers	:	0		
No. of Market Sheds	:	0		
Main Sources of Income	:	Agriculture		

### **3.1.2. Non-Autonomous Area: Silkur Village**

Silkur is one of the oldest Chakma settlements in Mizoram which is located in the bank of river Karnafuli near Bangladesh border. It also serves as the main transportation system as the road condition is poor. It is about 14 Km from Tlabung which is the major town the village is connected. It was established in 1969. The village council is composed of cluster of three villages. The village council does not have basic infrastructure facilities and services. Most of the villages follow wet rice cultivation, petty business and fishing as main sources of income. In terms of education attainment the percentage is also poor (see Table 4.2.1). The

villagers have to travel either to Tlabung or Lungsen (40 Km) for Banking, Official works, Health care and better education as they don't have this facilities in their village (See Fig.3.3).

**Table 3.2 Demographic Profile of Silkur Village**

Name of Village	:	Silkur		
Year of Establishment	:	1969		
No. of Households	:	217		
Population	:	1275	Male	: 629
	:		Female	: 646
No. of Schools	:	5		
No. of Buddhist Temples	:	2		
No. of Churches	:	2		
No. of Water Reservoirs	:	3		
No. of transformers	:	5		
No. of Anganwadi Centers	:	3		
No. of Playgrounds	:	1		
No of Community Halls	:	1		
No of Health Centers	:	0		
No. of Market Sheds	:	0		
Main Sources of Income	:	Agriculture		

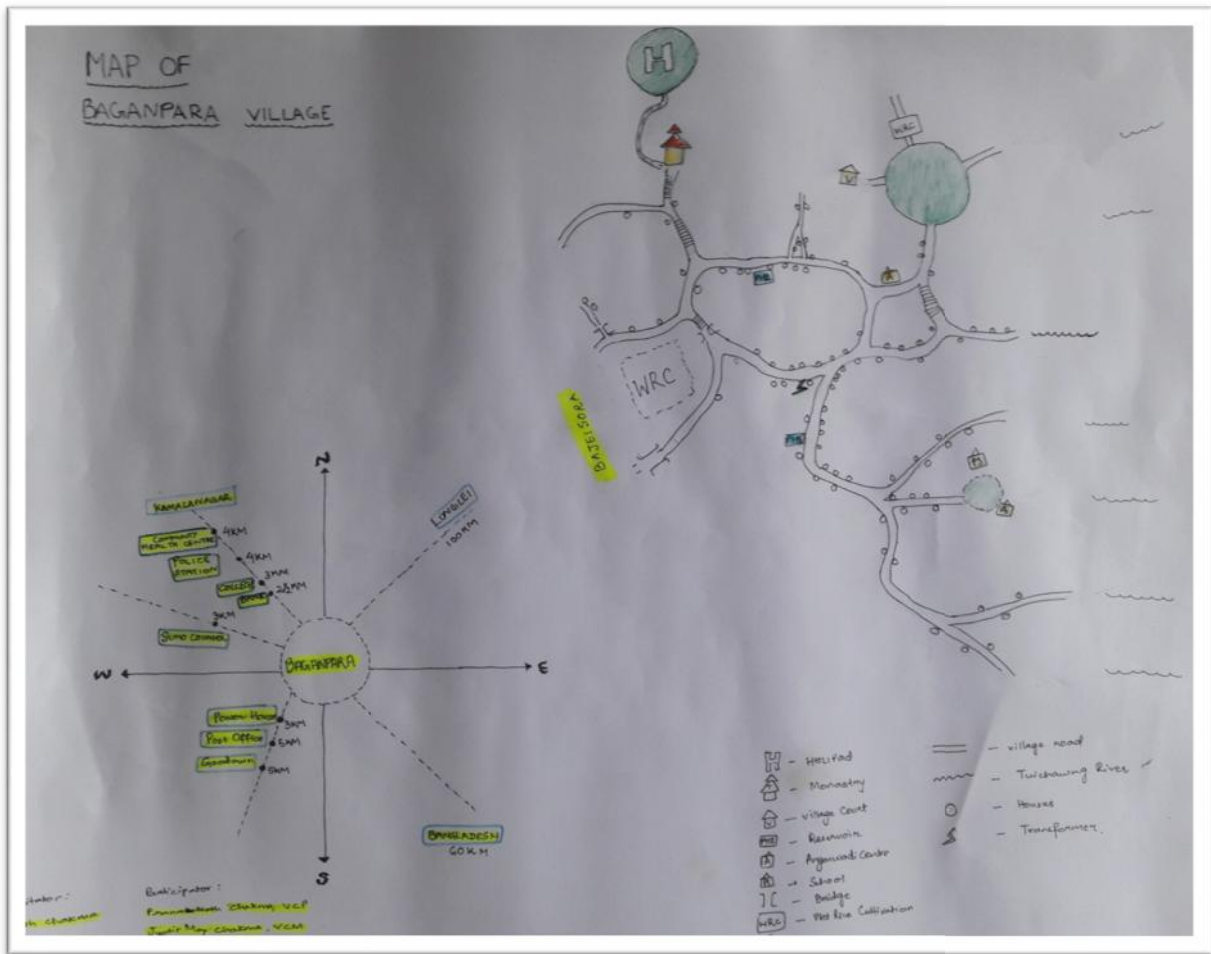


Figure 3.1 Social and Resource Map of Baganpara

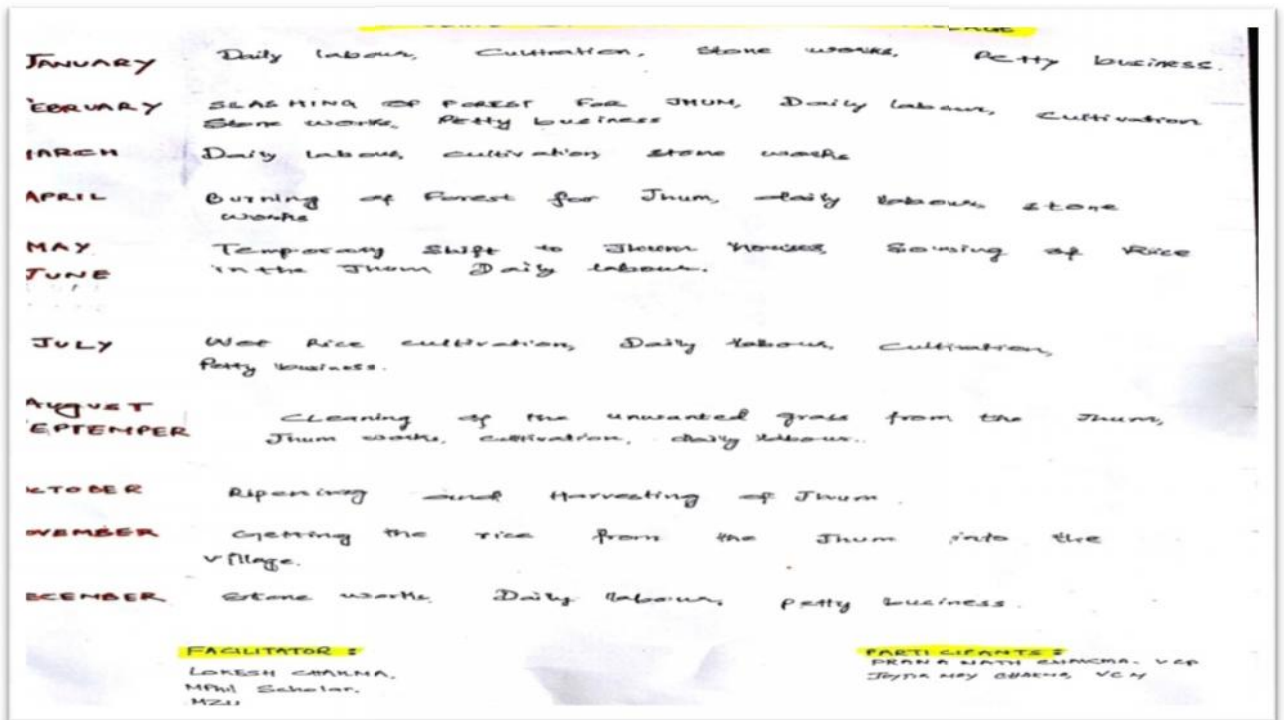


Figure 3.2 Seasonal Calendar of Baganpara

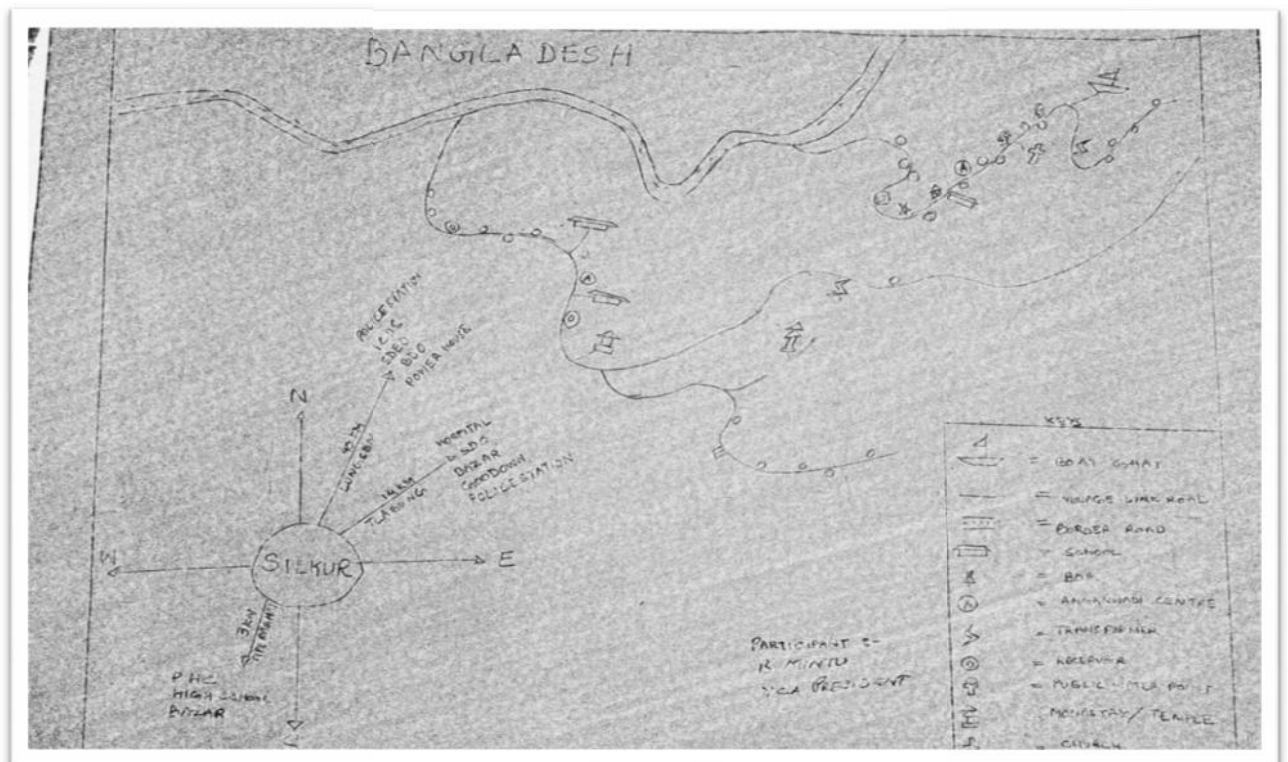


Figure 3.3 Social and Resource Map of Silkur

### 3.2. Research Design

The research design is presented in terms of objectives, hypotheses and methodology in the following subsections.

### **3.2.1. Objectives**

These are the main objectives of the study:

1. To probe into the patterns of economic and social infrastructure development in the Chakma settlements of Mizoram.
2. To assess the socio economic development of Chakma settlements in Mizoram.
3. To assess the relationship between infrastructure development and socioeconomic development at village level.
4. To assess the utilisation of social and economic infrastructure among the Chakma households.
5. To determine the relationship between the households access to infrastructure and its living conditions.
6. To understand the social dynamics of infrastructure and socio economic development in the Chakma settlements in Mizoram.

### **3.2.2. Hypotheses**

To provide focus to the study the following hypotheses were formulated.

1. Socio Economic development among the Chakma settlements differs between the autonomous and non-autonomous district areas.
2. Social and economic infrastructure is directly related to socio economic development of households at village level.
3. Household's access to social and economic infrastructure determines its living conditions.

The first hypothesis have been drawn intuitively while the other two hypotheses were drawn from the results of earlier studies (see Latif, 2002; Sahoo, Dash and Nataraj, 2010; Canning and Pedroni, 2004).

### **3.2.3. Methodology**

The study is descriptive in design and cross sectional in nature. It utilizes mixed approach and it is based on the secondary and primary data. Abstract of Village Survey (2011-12) published by LAD (Local Administration Department), Government of Mizoram constitute the secondary data. Primary data is collected through quantitative and qualitative methods concurrently. However, the study is predominantly quantitative in its orientation.

### **3.2.3.1. Sampling**

The unit of study has been on village as well as on household. All the Chakma villages and households in Mizoram constitute the population of the study.

Secondary data related to all Chakma villages in the autonomous and non-autonomous district are collected from LAD. Samplings are used for the study at household level. A multi stage sampling procedure was used to select district, villages, and households. All the three districts with Chakma villages viz., Lawngtlai, Mamit and Lunglei where the Chakma villages are locate will be selected. The representing villages are then classified into autonomous district council area and non-autonomous district council area. Secondly, on the basis of indicators of infrastructure and development one representative village each were selected from autonomous council area and non-autonomous council area. Finally, the selection of the households in each of the selected village was done through the utilization of stratified random sampling. The households are further sub divided into poor and non-poor category and using systematic random sampling proportionately households are selected.

### **3.2.3.2. Data Collection, Processing and Analysis**

Quantitative primary data was collected through pre-tested structured household interview schedule. Participatory Rural Appraisal (PRA) was the main sources of qualitative data collection. PRA tools like Social Map, Resource Map, Services and Opportunities Map, Time Line and Seasonal Calendar.

The collected primary data was processed with CS-Pro and analysed with SPSS package. For analysis of data apart from simple averages, ratios, cross tabulation and percentages, 't' test and 'Karl Pearson's Product Moment Correlation, were used to test the hypotheses.

In this chapter, an attempt has been made to present the setting and methodology of the present study. In the next chapter, results of analysis of primary and secondary data will be presented and discussed.



## **CHAPTER IV**

## **RESULTS AND DISCUSSION**

## **CHAPTER IV**

### **RESULTS AND DISCUSSION**

The Chakmas in Mizoram are the second largest population after the Lushai tribe inhabiting in the south-western part spread across three districts with an estimated population of about 100,000 viz. Lawngtlai, Mamit and Lunglei. The Chakma Autonomous District Council (CADC) was formed under the Sixth schedule of the Constitution of India on 29 April 1972 with an area of 1500 square kilometres sharing international borders with Myanmar and Bangladesh. Half of the Chakma population remained outside the CADC area. The total population of CADC is 43,528 with 70 percent dependent on agriculture (Census of India 2011). Kamalanagar is the Headquarter of the CADC and is headed by the Chief Executive Member (CEM) and Executive Members (EMs). The Council has a total of 24 Members of District Council (MDCs), out of which 20 are elected members and the other 4 being nominated members. It has 73 Village Councils and 27 Departments under its jurisdiction (see Figure 3.4 & 3.5).

Regional disparity in terms of development in India is evident from several governmental as well independent institutional reports and studies. In Mizoram the most backward district is Lawngtlai followed by Mamit and Lunglei districts in terms of human development. All these three districts have a significant proportion of the Chakma population who are among the most backward community in the state in terms of most of the indicators of development. Despite having an ADC and being the second largest population in the state, the Chakma villages are economically and socially backward compared to the members of other tribes in the state. In the light of the results the study will offer suggestions for policy making and social work advocacy. The results of the study will be useful for policy makers, planners and social workers at multilevel to play their role better in the tribal development in the North East Region.

#### **4.1. Infrastructure Development and Tribal development: Village Level Analysis**

In this section, the data collected from the secondary sources will be highlighted according to the following: Distribution of different types of villages, Demographic Characteristics, Occupational Diversity, and Access to various socio-economic infrastructure and relationship between them.

##### **4.1.1. Demographic Profile of the Villages**

The demographic profiles of the villages are classified into distribution of villages and households, Population Distribution by Gender, and Size of Family.

#### **4.1.1.1. Distribution of Villages and Households**

The total number of sample is 340 villages comprising four types of villages sub-divided into two categories, i.e. 74 Chakma villages, 133 Mizo villages, 19 Bru villages and 19 Mix villages from Autonomous region and 28 Chakma villages, 51 Mizo villages, 9 Bru villages and 7 Mix villages from Non-Autonomous region. There are more villages in the Autonomous region consisting 245 villages while the Non-Autonomous region have only 95 villages. There are more Mizo villages having similar percentage in both the region with 54 per cent comparing to other types of villages which is followed by Chakma villages with 30 per cent in Autonomous region and 29 per cent in Non-Autonomous region. The figures also reveal that Mix villages are the least among all the villages in both the region (see table 4.1).

The distribution of households in both the regions are uneven with total number of households at 66428 (100%) where Mix villages have the highest number of households with 25380 (58%) in Autonomous region and 10533 (46%) in Non-Autonomous region. It indicates that this type of villages is large as it has a mix population of Chakma, Mizo, Bru, and other tribes. The Mizo villages are the second highest with 12500 (29%) followed by Chakma villages with 3194 (7%) households in Autonomous region. Whereas, Bru villages is the second highest with 8648 (38%) followed by Mizo villages having 2000 (9%) households and Chakma villages with only 1838 (8%) households in Non-Autonomous region. The lowest numbers of households are from Bru villages in Autonomous region which is 2335 (5%) households and Chakma villages have the lowest number of households in Non-Autonomous region with 1838 (8%) households. Overall, the highest numbers of households are from Mix villages comprising 35913 (46%) households followed by Mizo villages with 21148 (32%) households and Chakma villages having 5194 (8%). The lowest number of households are 4173 (6%) is from the Bru village (see table 4.2).

#### **4.1.1.2. Population Distribution by Gender**

There is a similar pattern of the distribution of persons by gender in almost all the villages of both the regions. Mizo villages, Chakma villages and Bru villages have similar patterns with 51 percent male and 49 percent female, and Mix villages have 50 percent males and 50 percent female in the Autonomous region. The villages from Non-Autonomous region are marginally different than the Autonomous region. They also follow a similar pattern among the villages where Mix villages, Chakma villages and Bru villages have 52 percent male and 48 percent female, and Mizo villages have 51 percent male and 49 per cent female population. The overall population of male (51%) and female (49%) are equivalent in

Autonomous region. The male (52%) and female (48%) population are also same in the Non-Autonomous region. Overall, in both the region the populations of male (51%) are more than the female (49%) population (see table 4.3).

There is not much difference in the overall mean sex ratio in all the villages. But it can be seen that the mean sex ratio in Chakma (.96) and Mizo (.97) villages in autonomous region fall below the average mean (.98). In non-autonomous region the mean sex ratio of Bru (.92) and Chakma (.91) is less than the average mean (.94). The figures also reveal that in both the regions Chakma villages fall below the average mean sex ratio (see Table 4.4).

#### **4.1.1.3. Size of Family**

The overall pattern reveals that Chakma villages have bigger family size than the other villages. The average mean family size in autonomous region is 4.74 where Bru (4.73) and Mizo (4.35) villages fall below it. The Chakma (4.93) and Mix (4.92) villages in non-autonomous region also fall below its average mean family size which is 5.02. In overall, the average mean family size is 4.82 where only Mizo (4.79) and Bru (4.57) are below it (see Table 4.5).

#### **4.1.2. Occupational Structure and Diversification**

The occupational structure and diversity in the villages of the selected districts are classified into Cultivators, Government Servants, Business, Daily Labour, and Others. The majority of the villages follow cultivation as their main occupation in both autonomous and non-autonomous region. In autonomous region the average mean value for cultivators is 62.9 where the Bru (80.9) villages have the highest mean value followed by Mix (71.2) and Chakma (67.2). The Mizo villages has the least mean value at 56.4 in terms of cultivation but in the governmental job opportunities the Mizo villages shows more opportunity in the governmental sector with mean value at 18.4 comparing to the average mean value of 13.9. All the other villages' shows below the average mean value in terms of government servants with least from Bru (6.5), followed by Chakma (9.0) and Mix (11.4). It also shows that only Chakma villages have more opportunities in terms of business compared to others, having a mean value of 7.0 which is much higher than the average mean value at 4.5. The figures also reveal that majority of the Mizo have more opportunity in terms of daily wage labour with mean value of 16.7 compared to average mean value at 13.3.

In the non-autonomous region the Chakma villages do not have much opportunity across all the identified indicators. Similar to the autonomous region, the non-autonomous region also shows that majority of them are cultivators. In terms of governmental job opportunities

Bru (14.1) and Mizo (14.3) villages are better where the average mean value is at 11.4 and the Chakma villages are the least with mean value at only 5.4. In terms of business opportunities the Bru (4.3) and Mix (7.1) villages is better than the others where the average mean value is at 4.0. All the other villages except Chakma (9.3) villages have lesser opportunities in terms of daily labour where the average mean value is at 11.0. In other kinds of opportunities as well the Chakma villages do not much occupational opportunities (see table 4.6).

#### **4.1.3. Access to Water Supply and Sanitation**

The overall access to sanitation is poorer in Bru, Mix villages compared to the Mizo and Chakma villages. Mizo villages have better water connection in both the regions. The pattern shows that the access to water connection is miserable in Bru (0.4) villages, Mix (4.5) villages are marginally better than the Chakma (4.3) villages, and Mizo (5.7) villages have well access to it where average mean value is at 4.8 in the autonomous region. Majority of the villages do not have septic tanks except for the Chakma (36.2) villages with the average mean value at 27.5. Only the Mizo (34.6) villages have better access to bath room facilities as the average mean value with no bath room is at 38.8. Sanitation facilities are also in a bad condition in Bru (-0.3) villages and Mix (-0.5) villages where the average mean value is at 0.0.

The access to water connection in the non-autonomous region is similar to the autonomous region where Bru (1.5) and Chakma (4.0) villages are also in a poor state with an average mean value at 4.3. Majority of the villages do not have septic tanks except for the Mizo (39.6) villages where the Chakma (9.6) village have the least of them followed by the mix (14.5) villages at an average mean value at 27.2. Only Mizo (42.7) villages have better access to bath room compared to Chakma (61.6), Bru (73.4) and Mix (52.1) villages as the average mean value with no bathroom is at 51.8. The sanitation facilities of Chakma (-0.6), Bru (-0.6) and Mix (-0.4) villages are in a poor state as compared to Mizo village with average mean value at -0.1. The overall pattern shows that the Mizo villages are better than other types of village in access to water supply and sanitation (see Table 4.7).

#### **4.1.4. Access to Physical Infrastructure**

The physical infrastructure indicators identified are categorized into Electricity, LPG, Phone, Computer, Internet, TV and Vehicle. The use of computer and internet are marginal in all the villages. In autonomous region Chakma (16) villages have the least access to electricity followed by Bru (23) villages while Mizo (70) villages have greater access to it

with the average mean value at 48. Similar to the earlier pattern, the access to LPG is also poor among Bru (3) and Chakma (6) village with average mean value for LPG at 25. In terms of phone as well the Mizo (29) villages have better access to it compared to Mix (15), Chakma (6) and Bru (8) villages where the average mean value for phone is at 20. Access to TV is also more in the Mizo (46) villages as it exceeds the average mean value (27) while Chakma (11) and Bru (11) villages exhibit similar pattern. Even in terms of owning vehicle the Mizo (13) villages shows higher than the average mean value (8) compared to Mix (5), Chakma (1) and Bru (1) villages.

The pattern in non-autonomous region follow little similar to the autonomous region except in few indicators. The Bru (77) and Mizo (79) villages exceeds more than the average mean value (65) of electricity which shows that they are in better state compared to Chakma (37) and Mix (57) villages. All the villages are in a poor state in terms of access to LPG except the Mizo (37) villages where the average mean value is at 24 and Chakma (7) villages are the least among them. Again, the figures reveal that Chakma villages among the others have the least access to phone with average mean value at 25. The use of computers and internet is limited across all the villages however the Mizo villages have better access to these facilities compared to other village. The access to TV is also least among the Chakma (10) and Bru (33) villages falling behind the average mean value (36). In all the villages the access to vehicle is minimal but the Mizo (17) villages have better access to vehicle as compared to the Chakma (1) and Bru (9) villages with average mean value at 11. From overall patterns, it is clearly shows that the Mizo villages have better access to household infrastructures among all the villages in both the region. It also shows that the Bru villages have better access to household infrastructure in non-autonomous region as compared to the autonomous region.

The households access to physical infrastructures from autonomous and non-autonomous region shows that in autonomous region the Mix (-.42), Bru (-.80) and Chakma (-.91) villages do not have better access to the physical infrastructure while Mizo (.54) villages have better access to it where the average mean value is at -.07. The figures shows similar pattern in the non-autonomous region as well, the Mizo (.72) villages have better access to physical infrastructure compared to Mix (.03) Bru (.07) and Chakma (-.73) villages where the average mean value is at .18. In general, access to various physical infrastructures is better in the Mizo villages and the Chakma villages are the least in terms of access to physical infrastructures in both autonomous and non-autonomous region (See Table 4.8 & 4.9).

#### **4.1.7. Tribal Development: Living Conditions**

The patterns of living condition and education attainment are the identified indicators for the tribal development in both the region. The per capita income is poor in the Bru (6084) and Mix (13042) villages while Chakma (32171) and Mizo (37750) villages are in better condition in the autonomous region at an average mean value of 31689. The figures also reveal that only the Chakma (422598) villages have better per capita income comparing all the other villages in non-autonomous region where the average mean value is at 129651.

The overall mean value (.01) of education attainment in the Mizo village (.45) is far better than the Mix (-.17), Bru (-.60), and Chakma (-.60) village in the autonomous region. Whereas, in the non-autonomous region the mean value (-.02) of education attainment shows that Mix (.24) and Mizo (.36) villages have better education accomplishment comparing to Bru (-.27) and Chakma (-.71) villages. The figures also show that there is different pattern in terms of Matric passed, Plus 2 passed, and Graduated across the different villages from both the regions (see table 4.10).

#### **4.1.8. Demographic Characteristics, Infrastructure and Tribal Development**

The relationship between Demographic Characteristics, Infrastructure and Tribal Development were analysed and discussed in this subsection (see table 4.11). In this section, the second hypothesis that social and economic infrastructure has positive effect on the tribal development at village level is tested with Karl Pearson's product moment correlation. Composite index of physical infrastructure viz., access to electricity, LPG, Phone, Computer, internet, TV and Vehicle is considered. For social infrastructure access to water and sanitation was considered. Occupational diversity Index and Per capita income at village level have been construed as indicators of economic development while educational attainment is considered as indicator of social development.

The sex ratio does not have any significant relationship with the indicator of social development viz., Education Attainment. It does not have significant relationship with the Per capita Income or Occupational Diversity the indicators of economic development.

The size of family has significant relationship with occupational diversity which means the greater the size of the family there are more occupational diversification or economic development. However, it does not have significant relationship with per capita income.

Physical infrastructure has positive relationship with occupational diversity and educational attainment indicators of economic and social dimensions of development. Yet it does not have significant relationship with per capita income an important indicator of

economic development. Social infrastructure measured in terms of access to sanitation and water supply has significant positive effect on educational attainment as well as occupational diversification though its relationship with per capita income is not significant. Hence the second hypothesis that social and economic infrastructure has positive relationship with tribal development has been validated.

## **4.2. Infrastructure Development and Tribal development: Household Level Analysis**

In this section, the findings from the analysis of primary data collected from the households with structured household interview schedule are discussed. They are highlighted in terms of Demographic Characteristics of the respondents, Socio-economic characteristics of the respondents, Access to various socio-economic infrastructure development and its level of quality, and the relationship between infrastructure and the households living conditions.

### **4.2.1 Demographic Characteristics of the Respondents**

The demographic profile of the respondents from both the villages similar characteristics. The majority of the respondents are male (87%) in both the autonomous and non-autonomous region with only (13%) female respondents. Most of the respondents are in the middle age (54%) group followed by the youths (38%) and the least are from the old age (8%) group. It also reveals that majority of them are married (90%) and only 3 respondents are unmarried and 5 percent are widowed from both the region. Most of the respondents show poor level of education as there are 25 percent illiterate, 20 percent have primary school level education, 21 percent middle school level of education, 20 percent have attained high school, while only 4 respondents have higher secondary education, and only few have college (8%) and above qualifications (see Table 4.12).

The demographic characteristics of the household members of the respondent's show that the total numbers of members are 317 with 146 members from Baganpara and 171 members from Silkur. There is no difference in terms of sex ratio in between the male (51%) and female (49%) in both villages. The pattern also shows that there is also not much difference between unmarried (47%) and married (50%). Majority of the member shows poor level of education with illiterates (36%), followed by high school (18%) level education. A small percent of them have completed higher education with higher secondary (6%), and college education (9%) level. The mean years of adult education in autonomous (5.9) region is better than the non-autonomous (4.1) region where the average mean value is at 5.0 (see Table 4.13).



The family profile of the respondent's shows that majority of them are nuclear type of family in both autonomous area (65%) and non-autonomous area (70%) respectively and all the families show stable (100%) form of family. The popular sizes of families are medium in both autonomous area (65%) and non-autonomous area (70%). Almost all of the family heads are male. This also highlights the characteristics of patriarchal features in the community (see Table 4.14).

#### **4.2.2 Earners and Dependents Ratio**

Table 4.15 illustrates the earners and dependents in respondents' household shows that there are more dependents than earners in both the region. In autonomous region the earner dependent (36%) ratio is lower than the dependent (64%) ratio. There are also more dependents (77%) than the earners (23%) in the non-autonomous region. This indicates that most of the household's members are dependent on only few earning members in both the region.

#### **4.2.3 Occupations of the Earning Households Members**

The total number of earners are 92 (ninety two) with 53 (fifty three) from autonomous and 39 (thirty nine) from non-autonomous region. The primary sources of income in autonomous regions' are daily wage labour (32%), Government worker (26%), Cultivator (23%). There are few secondary sources of income with only daily wage labour (9%) and petty business (6%). The prime occupations of non-autonomous regions' are cultivator (64%) followed by Government worker (13%), Artisan/ Craftsman (8%) and Petty Business 3 (8%). Most of them do not have secondary occupation with no sources (80%), petty business (8%), daily wage labour (5%), Cultivator (5%) and Skilled Private Job (3%). From the above figures it is clearly revealed that there are differences in the economic characteristics in both the villages. It also indicates that both this villages differs in their economic opportunities (see Table 4.16).

#### **4.2.4 Patterns of Land Ownership**

The Table 4.17 shows that the two villages have different pattern in the ownership of the land. Majority of the respondent in Baganpara village have Land Settlement Certificate (81%), Community Land (29%) and Temporary Pass (29%). Whereas in Silkur, majority of them hold Community Land (43%) followed by periodic land pass (27%), Land Settlement Certificate (13%) and Temporary Pass (13%).

#### **4.2.5 Quality of Housing Condition**

The housing conditions in both Autonomous and Non-autonomous region are almost similar. All the respondents owned the houses they live-in. Only few of them have benefitted from Government housing schemes in Autonomous (26%) and Non-autonomous region (17%). Most of the houses are Kutchha with Autonomous (84%) and Non-autonomous (90%), only few of them are Semi-pucca in Autonomous (16%) and Non-autonomous (10%). All the houses use woods as its post. Most of house wall used are Bamboo in Autonomous (58%) and Non-autonomous (87%), followed by Tiles, i.e. (36%) and (13%), and least are Woods (7%). There are different types of house floors with majority of them woods (45%), bamboo (26%), concrete (16%), and mud 4 (13%) in Baganpara (autonomous) village. Most of the house walls in Silkur (non-autonomous) are Bamboo (47%), Woods (37%), Concrete (10%), and Mud (7%). Tin roofs are most common in both the villages, i.e. Baganpara (97%) and Silkur (73%). There are also few houses in Silkur (27%) which uses Hay as roof (see Table 4.19).

#### **4.2.6 Quantitative Assessment of Housing Condition**

The quantitative assessment of housing conditions which shows identical figures in terms of number of rooms with minimum 1, maximum 5 and mean number at 3 in both the region. But there is differences in terms of approximate square feet with average mean at 454 (four hundred fifty four) square feet in autonomous and 329 (three hundred twenty nine) square feet in non-autonomous region (see Table 4.20).

#### **4.2.7 Infrastructure Facilities and Amenities at Household Level**

Out of total 15 (fifteen) different facilities and amenities identified, access to telephone/mobile network is the highest in non-autonomous (97%) region and access to electric connection is highest in autonomous (90%) region. In the Autonomous region there are telephone/mobile (87%) connections, many of the households have separate kitchen (74%), televisions (68%), LPG (61%) connection, own refrigerator (48%), separate bath-room (26%), own two-wheeler (16%), laptops/computers (16%), inverters(6%), own boat (3%) and only few own four wheeler (3%). Whereas in the non-autonomous region access to electric connection (77%) is better. This is the second highest among the other facilities and amenities identified. The households also have separate kitchens (70%), access to televisions (53%), LPG (57%) connection, own refrigerator (43%), few households have separate bath-room (23%), two-wheeler (7%), only few have access to use of laptops/computers (3%), inverters (10%), own boat (13%) and four wheeler (3%). Overall in both the region, majority

of the households have access to basic amenities and facilities except for utilization of transportation system and computers.

There are some differences in the access to drinking water facilities between the two villages. The autonomous region has a better water connection comparing to the non-autonomous region, i.e. tap water connection in autonomous (68%) region and non-autonomous (7%) region. The main sources of drinking water in non-autonomous region are public water point (40%) and stream/river/spring (37%). The sanitation facilities are in a miserable state as not a single household has a drainage system in both regions. There are only few in-house toilet facilities in autonomous (13%) and non-autonomous (3%) region. So, there is not difference in the access to different facilities and amenities in both the region (see Table 4.21).

#### **4.2.7 Availability of Physical Infrastructure**

Majority of the physical infrastructure identified such as Roads Linking Village with Other Towns (100%), Roads Linking Village with Other Villages (100%), Roads within village (100%), Boat Services (98%), Grocery Shops in the Village (98%), Road Linking Village with District HQ (98%), Supply of Electricity (97%), Mobile telephone network (95%), Public Distribution System (90%), TV Satellite Network (85%), and Supply of LP Gas (77%) are available in both the region where respondents have answered to its' availability. Despite the availability of these physical infrastructures some of them are in a miserable condition (see Table 4.22).

#### **4.2.8 Availability of Social Infrastructure**

There is lack of social infrastructure in both the region as out of total 14 identified social infrastructures only 9 are available. All the respondents answered to the availability of these common social infrastructures, i.e. Anganwadi (100%), Primary School (100%), Temple/Monastery/Church (100%), Water Supply (98%), Sport and Games Facilities (97%). Only few respondents answered the availability of Middle School (6%), sanitation facilities (3%) and public drainage (71%) in autonomous region; and middle school (100%) and sanitation facilities (93%) in the non-autonomous region. According to the table in both the region these social facilities are lacking High School, Higher Secondary School, College, Pharmaceutical Shops and PHC (Primary Health Centre). The non-autonomous region have better social infrastructure as compared to autonomous region as seen in the figures where only 6 social infrastructure indicators are available whereas in non-autonomous region there

are 8 available social infrastructure indicators. In general terms, both the regions are in a poor state in terms of availability of social infrastructure (see Table 4.23).

#### **4.2.9 Quality of Physical Infrastructure**

The mean quality of all physical infrastructures is almost similar in both the region but in some indicators autonomous is better than the non-autonomous region. Most of the respondent alleged that there is lack of physical infrastructure in both the region. These are the common indicators in both the region which shows good quality: Boat Services, TV Satellite Network, Public Distribution System, Grocery Shops in the Village, Supply of Electricity whose mean values is higher (above 3.0). Condition of the majority physical infrastructure indicators exhibits lower in terms of quality. These are the infrastructure with low quality with mean value below 2.0: Mobile telephone network, Supply of LP Gas, Public Drainage, and the lowest (below 1.0) are Roads within village, Road Linking Village with District HQ, Roads Linking Village with Other Towns, and Roads Linking Village with Other Villages in both the region (see Table 4.24)

#### **4.2.10 Quality of Social Infrastructure**

Only 4 social infrastructure indicators show well in terms of quality out of 13 identified indicators. Quality of social infrastructure such as Temple Monastery or Church, Water Supply, and Anganwadi Centre are good in both the region. The quality of primary (3.2) and middle (3.8) school of non-autonomous region are better compared to the autonomous region whose mean values are at 2.7 and 1.1 respectively. But there are some differences in both the regions such as sports and games facilities are better in the autonomous (2.6) than non-autonomous (1.8) region with average mean value at 2.2 whereas in sanitation facilities (Toilet) the former (1.0) is poorer than the later (3.8) with the average mean value at (2.0). All the others such as Community Hall, Higher Secondary School, College, High School, Pharmaceutical Shops in the Village, and Primary Health Centre or Sub Centre are not available (see Table 4.25).

#### **4.2.11 Differences in Development and Infrastructure**

The indicators shows that the mean years of adult education is better in the autonomous as compared to non-autonomous region where the average mean value is at 4.7. Even in terms of education SD where the average mean is 3.6, the autonomous region shows better results than the non-autonomous region. The annual income is also higher (140290) in the former (132683) than the later as the mean annual income is 136549. It also shows that there is significant difference in mean of autonomous and non-autonomous areas in the quality of

social infrastructure. In the light of this results, hence the first hypothesis that socio economic development among the Chakma settlements differs between the autonomous and non-autonomous district areas is validated (see Table 4.26).

#### **4.2.12 Quality of Physical and Social Infrastructure and Tribal Development**

The final hypothesis of the present study states that the perceived quality of physical and social infrastructure determines its living conditions. To test this hypothesis Karl Pearson's product moment correlation coefficients have been used.

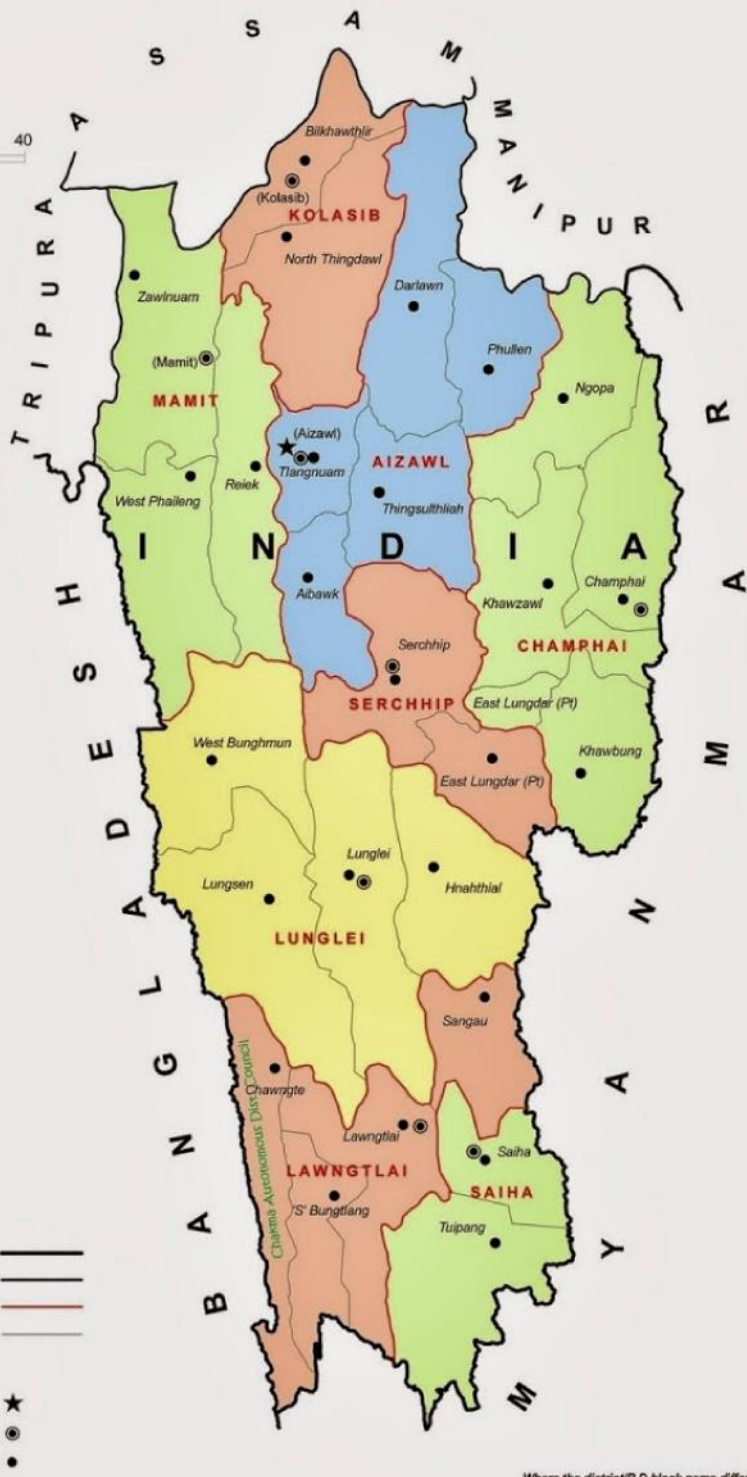
Annual household income, mean years of adult education were construed as the indicators of economic and social dimensions of tribal development. Housing conditions in terms of number of rooms and square feet of house was considered along with quality of physical and social infrastructure development. Housing conditions alone were significantly positively related to annual household income and mean years of adult education. However, the quality of physical and social infrastructure development do not have significant relationship with annual household income. Contrary to expectation, quality of social infrastructure has negative relationship with mean years of adult education. Hence, the hypothesis that the quality of the social and physical infrastructure determines the households living condition has been rejected (see Table 4.27).

#### **4.2.13 Important Infrastructural Needs Perceived**

The results from the free listing shows that only 12 infrastructure indicators are important out of 25 identified indicators but the priorities are different in both the region. In the autonomous region the most important needs are road (90%), followed by middle school (80.6%), public toilet (51.6%), community hall (48.4%), PHC (38.7%), pharmaceutical shops (35.5%), electric supply (22.6%), street light (25.8%), waiting shed (19.4%), market shed (16.1%), high school (12.9%), and public drain (12.9%). Despite similarities in few of the indicators there are some differences in the non-autonomous region. The main important needs are in Middle school (73%), followed by Road (70%), PHC (66.7%), high school (50%), community hall (43%), market shed (33.3%), water supply (33.3%), public toilet (20%), and primary school (16.7%) in the non-autonomous region (see Table 4.28).

In this chapter an attempt has been made to discuss the finding of analysis of primary and secondary data on infrastructure and development in the contexts of the districts and villages of Mizoram where Chakma people are settled.

**MIZORAM  
ADMINISTRATIVE DIVISIONS 2011**



- BOUNDARIES:**
- INTERNATIONAL.....
  - STATE.....
  - DISTRICT.....
  - R.D.BLOCK.....
- HEADQUARTERS:**
- STATE..... ★
  - DISTRICT..... ●
  - R.D.BLOCK..... ●

*Where the district/R.D.block name differs from its headquarters name, the latter is given within brackets.*

**Figure 3.4. Map of Mizoram**

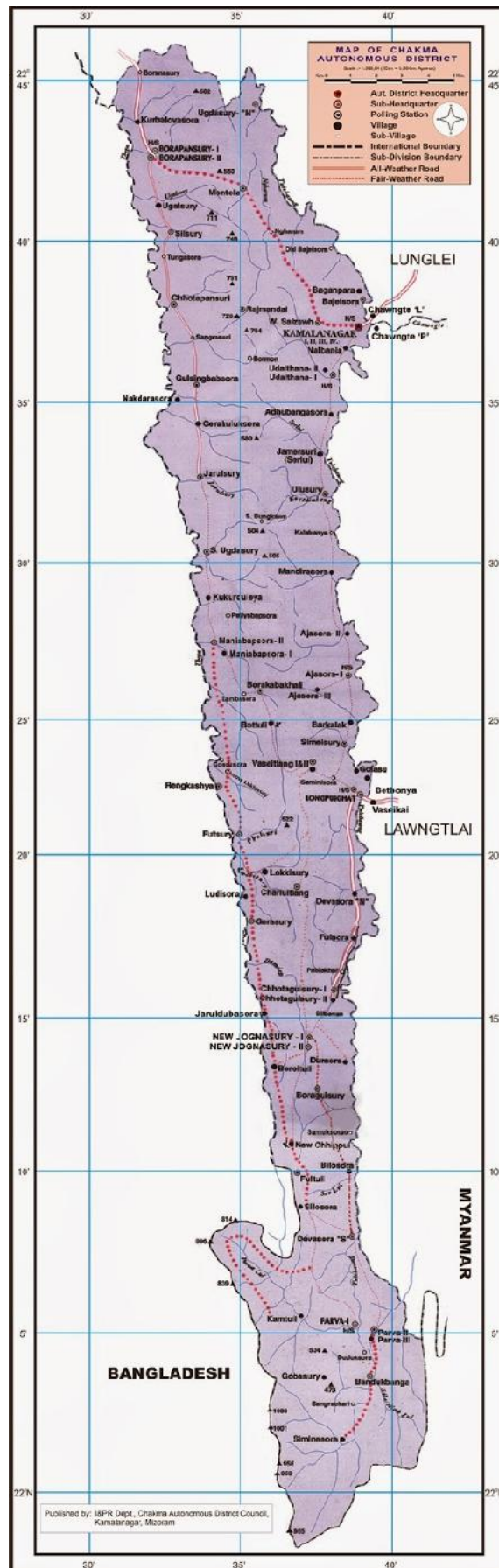


Figure 3.5 Map of CADC

**Table 4.1 Distribution of Villages**

Sl.No	Type of Settlement	Area		Total
		Autonomous	Non-autonomous	
1	Chakma	74 (30)	28 (29)	102 (30)
2	Mizo	133 (54)	51 (54)	184 (54)
3	Bru	19 (8)	9 (9)	28 (8)
4	Mix	19 (8)	7 (7)	26 (8)
5	Total	245 (100)	95 (100)	340 (100)

Source: Computed

**Table 4.2 Distribution of Households**

Sl.No	Type of Settlement	Area/ Type of Settlement				Total	Per cent
		Autonomous		Non-autonomous			
		Households	Per cent	Households	Per cent		
1	Bru	2335	5	8648	38	4173	6
2	Mizo	12500	29	2000	9	21148	32
3	Chakma	3194	7	1838	8	5194	8
4	Mix	25380	58	10533	46	35913	54
	Total	43409	100	23019	100	66428	100

Source: Computed



**Table 4.3 Distribution of Persons by Gender in the Selected Districts**

Sl.No	Area/ Type of Settlement	Gender				Persons	
		Male		Female		N	%
		N	%	N	%		
<b>I</b>	<b>Autonomous</b>						
	Mix	63562	50	62919	50	126481	100
	Mizo	27997	51	26732	49	54729	100
	Chakma	7947	51	7657	49	15604	100
	Bru	5757	51	5568	49	11325	100
	Total	105263	51	102876	49	208139	100
<b>II</b>	<b>Non-autonomous</b>						
	Bru	22483	52	20511	48	42994	100
	Mizo	5162	51	4973	49	10135	100
	Mix	26642	52	24899	48	51541	100
	Chakma	4423	52	4049	48	8472	100
	Total	58710	52	54432	48	113142	100
<b>III</b>	<b>Total</b>						
	Mizo	50480	52	47243	48	97723	100
	Chakma	13109	51	12630	49	25739	100
	Mix	90204	51	87818	49	178022	100
	Bru	10180	51	9617	49	19797	100
	Total	163973	51	157308	49	321281	100

Source: Computed

**Table 4.4 Sex Ratio: Averages at Village Level**

Sl.No	Tribe	Area				Total	
		Autonomous		Non-autonomous		Mean	S.D
		Mean	S.D	Mean	S.D		
1	Bru	.98	.16	.92	.11	.96	.14
2	Chakma	.96	.12	.91	.06	.96	.11
3	Mizo	.97	.20	.96	.08	.96	.18
4	Mix	.99	.13	.95	.21	.98	.16
	Total	.98	.16	.94	.16	.97	.16

Source: Computed

**Table 4.5 Size of Family**

Sl.No	Village	Area				Total	
		Autonomous		Non-autonomous			
		Mean	S.D	Mean	S.D	Mean	S.D
1	Bru	4.73	.75	5.16	1.55	4.79	.83
2	Chakma	4.94	.71	4.93	1.02	5.07	.71
3	Mizo	4.35	1.00	5.42	.65	4.57	1.22
4	Mix	4.93	.88	4.92	1.09	4.93	.94
	Total	4.74	.93	5.02	1.21	4.82	1.02

Source: Computed

**Table 4.6 Occupational Structure and Diversity in the Villages of the Selected Districts**

Sl.No	Area/ Type of Settlement	Cultivator (%)		Government Servants (%)		Business (%)		Daily Labour (%)		Others (%)		Occupational Diversity Index	
		Mean	S.D	Mean	S.D	Mean	S.D	Mean	S.D	Mean	S.D	Mean	S.D
<b>I</b>	<b>Autonomous</b>												
	Bru	80.9	21.8	6.5	8.2	1.7	3.5	7.2	9.7	3.6	7.8	.27	.21
	Chakma	67.2	24.1	9.0	8.1	7.0	7.9	10.4	12.8	6.4	11.2	.42	.24
	Mizo	56.4	31.8	18.4	13.5	3.7	7.8	16.7	21.2	4.7	11.0	.44	.21
	Mix	71.2	28.4	11.4	10.3	2.8	4.1	8.4	12.2	6.2	9.0	.36	.26
	Total	62.9	29.4	13.9	12.3	4.5	7.6	13.3	17.8	5.3	10.7	.41	.23
<b>II</b>	<b>Non-autonomous</b>												
	Bru	65.4	20.9	14.1	12.9	4.3	3.9	11.2	13.1	5.1	8.8	.46	.21
	Chakma	79.8	20.6	5.4	3.9	3.9	5.4	9.3	12.5	1.6	4.0	.29	.21
	Mizo	67.3	18.5	14.3	11.4	3.7	4.3	11.2	10.8	3.5	5.5	.45	.18
	Mix	68.0	21.6	7.3	5.2	7.1	6.6	15.6	17.6	2.0	3.0	.43	.22
	Total	70.5	20.0	11.4	10.5	4.0	4.7	11.0	11.9	3.1	5.4	.41	.20
<b>III</b>	<b>Total</b>												
	Bru	75.7	22.4	9.1	10.4	2.5	3.8	8.5	10.9	4.1	8.0	.33	.22
	Chakma	70.3	23.8	8.1	7.4	6.2	7.5	10.1	12.7	5.2	10.1	.39	.24
	Mizo	59.7	28.8	17.2	13.0	3.7	6.9	15.1	18.9	4.4	9.6	.44	.20
	Mix	70.4	26.4	10.3	9.3	3.9	5.1	10.3	13.8	5.1	8.0	.38	.25
	Total	65.1	27.3	13.2	11.9	4.4	6.9	12.7	16.4	4.7	9.5	.41	.22

Source: Computed

**Table 4.7 Access to Water Supply and Sanitation**

Sl.No	Area/ Type of Village	Water Connection (%)		Septic Tank (%)		No Bathroom (%)		Sanitation	
		Mean	S.D	Mean	S.D	Mean	S.D	Mean	S.D
<b>I</b>	<b>Autonomous</b>								
	Chakma	4.3	10.2	36.2	32.3	38.0	63.6	0.2	1.0
	Mizo	5.7	14.0	26.4	26.3	34.6	32.2	0.1	1.0
	Mix	4.5	13.1	14.0	22.9	46.4	45.5	-0.3	0.8
	Bru	0.4	1.1	15.5	30.7	53.7	43.3	-0.5	0.8
	Total	4.8	12.3	27.5	29.0	38.0	45.6	0.0	1.0
<b>II</b>	<b>Non-autonomous</b>								
	Mizo	4.9	11.3	39.6	25.5	42.7	31.3	0.3	1.0
	Mix	5.2	9.8	14.5	13.3	52.1	34.7	-0.4	0.8
	Chakma	4.0	6.2	9.6	18.0	61.6	45.7	-0.6	0.6
	Bru	1.5	3.3	21.2	19.8	73.4	29.9	-0.6	0.6
	Total	4.3	9.3	27.2	26.0	51.8	37.3	-0.1	0.9
<b>III</b>	<b>Total</b>								
	Mizo	5.5	13.3	30.0	26.7	36.8	32.1	0.1	1.0
	Chakma	4.2	9.2	28.7	31.3	44.6	59.8	0.0	1.0
	Mix	4.7	12.1	14.2	20.5	47.9	42.3	-0.3	0.8
	Bru	0.7	2.1	17.3	27.4	60.0	40.0	-0.5	0.7
	Total	4.6	11.6	27.4	28.2	41.9	43.8	0.0	1.0

Source: Computed

**Table 4.8 Households Access to Infrastructure in the Villages of Selected Districts**

Sl.No	Area/Settlement	Electricity (%)		LPG (%)		Phone (%)		Computer (%)		Internet (%)		TV (%)		Vehicle	
		Mean	S.D	Mean	S.D	Mean	S.D	Mean	S.D	Mean	S.D	Mean	S.D	Mean	S.D
<b>I</b>	<b>Autonomous</b>														
	Chakma	16	26	6	14	6	11	1	2			11	16	1	2
	Mix	36	36	21	35	15	12	1	3			18	22	5	6
	Mizo	70	30	39	39	29	16	5	8	1	5	46	23	13	12
	Bru	23	38	3	7	8	7	3	9	2	9	11	12	1	3
	Total	48	39	25	35	20	17	3	7	1	5	31	27	8	11
<b>II</b>	<b>Non-autonomous</b>														
	Chakma	37	35	7	13	11	5	1	1			10	11	1	1
	Mix	56	29	16	18	24	15	2	4			36	27	9	11
	Mizo	79	26	37	33	32	12	4	5	2	2	51	23	17	12
	Bru	77	17	12	12	24	15	1	1			33	16	10	9
	Total	65	34	24	29	25	14	3	4	1	1	36	27	11	12
<b>III</b>	<b>Total</b>														
	Chakma	22	30	6	13	8	10	1	1			10	15	1	2
	Mix	41	35	20	31	18	13	2	3			23	24	6	8
	Mizo	73	29	38	37	30	15	5	7	1	4	48	23	14	12
	Bru	40	42	6	9	13	12	2	7	2	8	18	17	4	7
	Total	53	38	25	34	21	17	3	6	1	4	32	27	9	11

Source: Computed

**Table 4.9 Households Access to Physical Infrastructure**

Sl.No	Tribe	Area/Settlement				Total	
		Autonomous		Non-autonomous		Mean	S.D
		Mean	S.D	Mean	S.D		
1	Mizo	.54	.92	.72	.73	.59	.87
2	Mix	-.42	.85	.03	.83	-.30	.85
3	Bru	-.80	.46	.07	.55	-.52	.63
4	Chakma	-.91	.50	-.73	.36	-.86	.47
	Total	-.07	1.03	.18	.89	.00	1.00

Source: Computed

**Table 4.10 Indicators of Living Condition and Education Attainment**

Sl.No	Area/Settlement	Per capita Income		Matric Passed (%)		Plus 2 Passed (%)		Graduated (%)		Education Attainment	
		Mean	S.D	Mean	S.D	Mean	S.D	Mean	S.D	Mean	S.D
<b>I</b>	<b>Autonomous</b>										
	Chakma	32171	162309	1.64	1.621	.75	.987	.53	.854	-.60	.34
	Mix	13042	14463	3.67	3.573	1.71	1.737	1.29	1.669	-.17	.79
	Mizo	37750	188880	6.45	5.983	3.40	3.479	2.23	2.196	.45	1.19
	Bru	6084	3765	1.75	1.489	.73	.636	.52	.626	-.60	.25
	Total	31689	165240	4.44	5.156	2.27	2.956	1.52	1.931	.01	1.06
<b>II</b>	<b>Non-autonomous</b>										
	Chakma	422598	2202904	1.09	.908	.56	.274	.35	.309	-.71	.11
	Mix	6791	3604	5.37	4.181	2.88	2.677	1.94	2.528	.24	1.10
	Mizo	7056	6742	5.98	3.924	3.26	2.427	2.06	1.845	.36	.85
	Bru	8523	8450	2.73	1.918	1.32	1.294	1.43	1.370	-.27	.54
	Total	129651	1195894	4.18	3.843	2.26	2.296	1.49	1.726	-.02	.85
<b>III</b>	<b>Total</b>										
	Chakma	141491	1171931	1.48	1.474	.70	.852	.48	.745	-.63	.30
	Mix	11359	12717	4.13	3.739	2.03	2.042	1.47	1.905	-.06	.88
	Mizo	29243	161045	6.32	5.484	3.36	3.216	2.18	2.101	.43	1.11
	Bru	6868	5653	2.06	1.669	.92	.919	.81	1.002	-.50	.39
	Total	59223	648436	4.37	4.819	2.27	2.783	1.51	1.873	.00	1.00

Source: Computed

**Table 4.11 Demographic Characteristics, Infrastructure and Tribal Development: Pearson's Correlation Matrix**

Sl.No		Sex Ratio	Size of Family	Education Attainment	Occupational Diversity	Sanitation	Physical Infrastructure	Per capita Income
1	Sex Ratio	1	.085	.096	.051	.018	.082	-.014
2	Size of Family	.085	1	.043	.161**	-.061	.092	.010
3	Education Attainment	.096	.043	1	.368**	.421**	.741**	.007
4	Occupational Diversity	.051	.161**	.368**	1	.367**	.389**	-.029
5	Sanitation	.018	-.061	.421**	.367**	1	.431**	.027
6	Physical Infrastructure	.082	.092	.741**	.389**	.431**	1	-.023
7	Per capita Income	-.014	.010	.007	-.029	.027	-.023	1

Source: Computed

\*P<0.05

\*\* P<0.01

**Table 4.12 Demographic Profile of Respondents**

Sl.No		District/ Area		Total N = 61
		Autonomous n = 31	Non-autonomous n = 30	
<b>I</b>	<b>Gender</b>			
	Male	24 (77)	29 (97)	53 (87)
	Female	7 (23)	1 (3)	8 (13)
<b>II</b>	<b>Age Group</b>			
	Youth( 18-35)	13 (42)	10 (33)	23 (38)
	Middle(35-60)	16 (52)	17 (57)	33 (54)
	Old (60 and Above)	2 (7)	3 (10)	5 (8)
<b>III</b>	<b>Marital Status</b>			
	Unmarried	1 (3)	2 (7)	3 (5)
	Married	28 (90)	27 (90)	55 (90)
	Widowed	2 (7)	1 (3)	3 (5)
<b>IV</b>	<b>Education Status</b>			
	Illiterate	7 (23)	8 (27)	15 (25)
	Primary (1-4)	3 (10)	9 (30)	12 (20)
	Middle(5-8)	5 (16)	8 (27)	13 (21)
	High School (9-10)	10 (32)	2 (7)	12 (20)
	Higher Secondary (11-12)	2 (7)	2 (7)	4 (7)
	College(13 and Above)	4 (13)	1 (3)	5 (8)

Source: Computed

Figures in parentheses are percentages

**Table 4.13 Demographic Characteristics of Members of Respondent Households**

Sl.No	Characteristic	District/ Area		Total N = 317
		Autonomous	Non-autonomous	
		n = 146	n = 171	
<b>I</b>	<b>Gender</b>			
	Male	75 (51)	86 (50)	161 (51)
	Female	71 (49)	85 (50)	156 (49)
<b>II</b>	<b>Marital Status</b>			
	Unmarried	66 (45)	93 (54)	159 (50)
	Married	74 (51)	75 (44)	149 (47)
	Widowed	6 (4)	3 (2)	9 (3)
<b>III</b>	<b>Education Status of Adults</b>	<b>n = 96</b>	<b>n = 92</b>	<b>n = 188</b>
	Illiterate	32 (33)	35 (38)	67 (36)
	Primary (1-4)	13 (14)	22 (24)	35 (19)
	Middle(5-8)	11 (12)	14 (15)	25 (13)
	High School (9-10)	23 (24)	11 (12)	34 (18)
	Higher Secondary (11-12)	5 (5)	6 (7)	11 (6)
	College(13 and Above)	12 (13)	4 (4)	16 (9)
	Mean Years of Adult Education	5.9	4.1	5.0
	Std. Deviation	5.3	4.5	5.0

Source: Computed

Figures in parentheses are percentages

**Table 4.14 Family Profile of Respondents**

Sl.No	Characteristic	District/ Area		Total N = 61
		Autonomous n = 31	Non-autonomous n = 30	
<b>I</b>	<b>Type of Family</b>			
	Nuclear	20 (65)	21 (70)	41 (67)
	Joint	20 (65)	21 (70)	41 (67)
<b>II</b>	<b>Form of Family</b>			
	Stable	31 (100)	30 (100)	61 (100)
<b>III</b>	<b>Size of Family</b>			
	Small(1-3)	6 (19)	3 (10)	9 (15)
	Medium(4-6)	20 (65)	21 (70)	41 (67)
	Large(7 and Above)	5 (16)	9 (30)	14 (23)
	Mean of Family Size	4.7	5.7	5.2
	Std. Deviation	1.5	2.4	2.1
<b>IV</b>	<b>Gender of Head</b>			
	Male	30 (97)	30 (100)	60 (98)
	Female	1 (3)	0 (0)	1 (2)

Source: Computed

Figures in parentheses are percentages

**Table 4.15 Earners and Dependents in Respondent Households**

Sl.No	Characteristic	District/ Area				Total N = 92	
		Autonomous n = 53		Non-autonomous n = 39		Total	
		Mean	SD	Mean	SD	Mean	SD
1	Earners	2 (36)	1	1 (23)	0	2 (29)	1
2	Dependants	3 (64)	2	4 (77)	2	4 (71)	2
3	Size of Family	5 (100)	2 (100)	6 (100)	2 (100)	5 (100)	2
	Earner Dependent Ratio	2		3		2	

Source: Computed

Figures in parentheses are percentages



**Table 4.16 Economic Characteristics of Earning Members**

Sl.No	Characteristic	District/ Area		Total N = 92
		Autonomous n = 53	Non-autonomous n =39	
<b>I</b>	<b>Primary Occupation</b>			
	Daily Wage Labour	17 (32)	1 (3)	18 (20)
	Artisan/ Craftsman	1 (2)	3 (8)	4 (4)
	Cultivator	12 (23)	25 (64)	37 (40)
	Skilled Private Job	5 (9)	1 (3)	6 (7)
	Petty Business	4 (8)	3 (8)	7 (8)
	Large Business	0 (0)	1 (3)	1 (1)
	Govt. Worker	14 (26)	5 (13)	19 (21)
<b>II</b>	<b>Secondary Occupation</b>			
	No Secondary Occupation	45 (85)	31 (80)	76 (83)
	Daily Wage Labour	5 (9)	2 (5)	7 (8)
	Cultivator	0 (0)	2 (5)	2 (2)
	Skilled Private Job	0 (0)	1 (3)	1 (1)
	Petty Business	3 (6)	3 (8)	6 (7)

Source: Computed

Figures in parentheses are percentages

**Table 4.17 Pattern of Land Ownership**

Sl.No	Nature of Land Possession	District/ Area				Total N = 61	
		Autonomous n = 31		Non-autonomous n = 30			
		Frequency	per cent	Frequency	Per cent	Frequency	Per cent
1	Land Settlement Certificate	25	81	4	13	29	48
2	Periodic Land Pass	9	29	8	27	17	28
3	Community Land	0	0	13	43	13	21
4	Temporary Pass	9	29	4	13	13	21

Source: Computed

Figures in parentheses are percentages

**Table 4.18 Annual Household Income**

Sl.No	Statistic	District/ Area		Total N = 92
		Autonomous n = 53	Non-autonomous n =39	
1	Minimum	24000	27000	24000
2	Maximum	555000	430000	555000
3	Mean	140290	132683	136549
4	Std. Deviation	131241	120129	124907
	't'	0.236		

Source: Computed

\*P&lt;0.05

\*\* P&lt;0.01

**Table 4.19 Housing Conditions: Qualitative Assessment**

Sl.No		District/ Area		Total N = 61
		Autonomous n = 31	Non-autonomous n = 30	
I	<b>Ownership of House</b>			
	Own	31 (100)	30 (100)	61 (100)
II	Benefitted under Housing Scheme	8 (26)	5 (17)	13 (21)
III	<b>Type of House</b>			
	Kuchcha	26 (84)	27 (90)	53 (87)
	Semi-Pucca	5 (16)	3 (10)	8 (13)
IV	<b>Type of Wall</b>			
	Bamboo	18 (58)	26 (87)	44 (72)
	Wood	2 (7)	0 (0)	2 (3)
	Tile	11 (36)	4 (13)	15 (25)
V	<b>Type of Floor</b>			
	Mud	4 (13)	2 (7)	6 (10)
	Bamboo	8 (26)	14 (47)	22 (36)
	Wood	14 (45)	11 (37)	25 (41)
	Concrete	5 (16)	3 (10)	8 (13)
VI	<b>Type of Roof</b>			
	Hey	0 (0)	8 (27)	8 (13)
	Bamboo Leaves	1 (3)	0 (0)	1 (2)
	Tin	30 (97)	22 (73)	52 (85)
VII	<b>Type of House Post</b>			
	Wood	31 (100)	30 (100)	61 (100)

Source: Computed

Figures in parentheses are percentages

**Table 4.20 Housing Conditions: Quantitative Assessment**

Sl.No		District/ Area		Total N = 61
		Autonomous n = 31	Non-autonomous n = 30	
<b>I</b>	<b>No. of Rooms</b>			
	Minimum	1	1	1
	Maximum	5	5	5
	Mean	3	3	3
	Std. Deviation	1	1	1
<b>II</b>	<b>Approximate Square Feet</b>			
	Minimum	144	192	144
	Maximum	1080	600	1080
	Mean	454	329	393
	Std. Deviation	218	111	183

Source: Computed

Figures in parentheses are percentages

**Table 4.21 Access to Facilities and Amenities**

Sl.No	Amenity / Facility	District/ Area				Total N = 61	
		Autonomous n = 31		Non-autonomous n = 30			
		Frequency	Per cent	Frequency	per cent	Frequency	per cent
	Telephone/Mobile	27	87	29	97	56	92
	Electric Connection	28	90	23	77	51	84
	Separate Kitchen	23	74	21	70	44	72
	Television	21	68	16	53	37	61
	LP Gas Connection	19	61	17	57	36	59
	Refrigerator	15	48	13	43	28	46
	Separate Bath Room	8	26	7	23	15	25
	Two Wheeler	5	16	2	7	7	11
	Computer/Laptop	5	16	1	3	6	10
	Inverter	2	6	3	10	5	8
	Owned Boat	1	3	4	13	5	8
	Four Wheeler	1	3	1	3	2	3
	<b>Source of Drinking Water</b>						
	Tap Water	21	68	5	17	26	43
	Public Water Point	9	29	12	40	21	34
	Stream/Spring/River	0	0	11	37	11	18
	Open Well	1	3	1	3	2	3
	Hand-pump	0	0	1	3	1	2
	Toilet Facility in House	4	13	1	3	5	8
	Drainage Facility	0	0	0	0	0	0

Source: Computed

**Table 4.22 Availability of Physical Infrastructure**

Sl.No	Physical Infrastructure	District/ Area				Total N = 61	
		Autonomous n = 31		Non-autonomous n = 30			
		N	%	N	%	N	%
1	Roads Linking Village with Other Towns	31	100	30	100	61	100
2	Roads Linking Village with Other Villages	31	100	30	100	61	100
3	Roads within village	31	100	30	100	61	100
4	Boat Services	31	100	29	97	60	98
5	Grocery Shops in the Village	30	97	30	100	60	98
6	Road Linking Village with District HQ	31	100	29	97	60	98
7	Supply of Electricity	30	97	29	97	59	97
8	Mobile telephone network	30	97	28	93	58	95
9	Public Distribution System	25	81	30	100	55	90
10	TV Satellite Network	26	84	26	87	52	85
11	Supply of LP Gas	24	77	23	77	47	77

Source: Computed

**Table 4.23 Availability of Social Infrastructure**

Sl.No	Social Infrastructure	District/ Area				Total N = 61	
		Autonomous n = 31		Non-autonomous n = 30			
		N	%	N	%	N	%
1	Anganwadi Centre	31	100	30	100	61	100
2	Primary School	31	100	30	100	61	100
3	Temple Monastery or Church	30	97	30	100	60	98
4	Water Supply	30	97	29	97	59	97
5	Sports and Games Facilities	22	71	26	87	48	79
6	Middle School	2	6	30	100	32	52
7	Community Hall	0	0	30	100	30	49
8	Sanitation Facilities(Toilet)	1	3	28	93	29	48
9	Public Drainage	22	71	0	0	22	36
10	Higher Secondary School	1	3	0	0	1	2
11	College	0	0	0	0	0	0
12	High School	0	0	0	0	0	0
13	Pharmaceutical Shops in the Village	0	0	0	0	0	0
14	Primary Health Centre or Sub Centre	0	0	0	0	0	0

Source: Computed

**Table 4.24 Quality of Physical Infrastructure**

Sl.No	Physical Infrastructure	District/ Area				Total N = 61	
		Autonomous n = 31		Non-autonomous n = 30			
		Mean	S.D.	Mean	S.D.	Mean	S.D.
1	Boat Services	3.7	0.6	3.9	0.7	3.8	0.6
2	TV Satellite Network	3.5	1.3	3.9	1.2	3.7	1.3
3	Public Distribution System	3.0	1.2	3.9	0.6	3.4	1.0
4	Grocery Shops in the Village	3.3	0.8	3.4	0.6	3.3	0.7
5	Supply of Electricity	3.1	0.8	3.0	0.8	3.1	0.8
6	Mobile telephone network	2.6	0.9	3.3	0.8	2.9	1.0
7	Supply of LP Gas	2.4	1.1	2.5	1.2	2.4	1.1
8	Public Drainage	2.3	1.3	1.0	0.0	1.6	1.1
9	Roads within village	1.7	0.8	1.4	0.7	1.5	0.7
10	Road Linking Village with District HQ	1.7	0.8	1.4	0.7	1.5	0.7
11	Roads Linking Village with Other Towns	1.5	0.6	1.4	0.7	1.4	0.6
12	Roads Linking Village with Other Villages	1.4	0.6	1.4	0.7	1.4	0.6
13	Adequacy of Infrastructure in Village	1.3	0.5	1.4	0.5	1.3	0.5

Source: Computed

**Table 4.25 Quality of Social Infrastructure**

Sl.No	Social Infrastructure	District/ Area				Total N = 61	
		Autonomous n = 31		Non-autonomous n = 30			
		Mean	S.D.	Mean	S.D.	Mean	S.D.
1	Temple Monastery or Church	3.4	0.8	4.0	0.0	3.7	0.6
2	Water Supply	3.8	0.8	3.2	0.8	3.5	0.9
3	Anganwadi Centre	3.3	0.8	3.1	0.9	3.2	0.8
4	Primary School	2.7	0.9	3.2	1.0	3.0	1.0
5	Middle School	1.1	0.6	3.8	0.5	2.5	1.5
6	Sports and Games Facilities	2.6	1.1	1.8	0.6	2.2	1.0
7	Sanitation Facilities(Toilet)	1.0	0.0	3.1	1.1	2.0	1.3
8	Community Hall	1.0	0.0	1.6	0.7	1.3	0.6
9	Higher Secondary School	1.1	0.4	1.0	0.0	1.0	0.3
10	College	1.0	0.0	1.0	0.0	1.0	0.0
11	High School	1.0	0.0	1.0	0.0	1.0	0.0
12	Pharmaceutical Shops in the Village	1.0	0.0	1.0	0.0	1.0	0.0
13	Primary Health Centre or Sub Centre	1.0	0.0	1.0	0.0	1.0	0.0

Source: Computed



**Table 4.26 Differences in Development and Infrastructure**

Sl.No	Indicator	District/ Area				Total N = 61		't'
		Autonomous n = 31		Non-autonomous n = 30		Mean	S.D	
		Mean	S.D	Mean	S.D			
1	Mean Years of Adult Education	5.3	3.2	4.0	3.0	4.7	3.2	1.67
2	Education SD	4.0	2.4	3.2	2.5	3.6	2.5	1.19
3	Annual Household Income	140290	131241	132683	120129	136549	124907	0.24
4	Quality of Physical Infrastructure	2.5	0.4	2.5	0.3	2.5	0.4	0.58
5	Quality of Social Infrastructure	1.8	0.2	2.2	0.2	2.0	0.3	7.60**

Source: Computed

\*P<0.05

\*\* P<0.01

**Table 4.27 Development and Quality of Infrastructure: Pearson's Correlation Matrix**

	Annual Household Income	No. Of Rooms	House Square Feet	Mean Years of Adult Education	Education SD	Quality of Physical Infrastructure	Quality of Social Infrastructure
Annual Household Income	1	.38**	.46**	.33*	.34**	0.08	-0.09
No. of Rooms	.38**	1	.46**	.34**	.43**	-0.19	-.41**
Approximate Square Feet	.46**	.46**	1	.29*	0.20	0.03	-.37**
Housing Conditions	.59**	.65**	.55**	.39**	.29*	-0.1	-.36**
Mean Years of Adult Education	.33*	.34**	.29*	1	.42**	-0.09	-.28*
Education SD	.34**	.43**	0.20	.42**	1	0.02	-0.19
Quality of Physical Infrastructure	0.07	-0.18	0.03	-0.09	0.02	1	.376**
Quality of Social Infrastructure	-0.09	-.41**	-.37**	-.28*	-0.19	.38**	1

Source: Computed

\*P<0.05

\*\* P<0.01

**Table 4.28 Infrastructure Needs of the Respondents: Results of Free Listing**

Sl.No	Infrastructure	District/ Area						Total N = 61		
		Autonomous n = 31			Non-autonomous n = 30					
		%	R	Salience	%	R	Salience	%	R	Salience
1	Road	90.3	1.3	0.8	70.0	2.9	0.4	80.3	2.0	0.6
2	PHC	38.7	3.8	0.2	73.3	2.9	0.5	55.7	3.2	0.3
4	Middle School	80.6	3.0	0.5	10.0	3.3	0.1	45.9	3.0	0.3
3	Community Hall	48.4	3.7	0.3	43.3	3.9	0.2	45.9	3.8	0.3
5	Play Ground	6.5	5.5	0.0	66.7	2.3	0.5	36.1	2.6	0.2
7	High School	12.9	4.3	0.1	50.0	3.0	0.3	31.1	3.3	0.2
6	Public Toilet	51.6	3.6	0.3	20.0	4.8	0.1	36.1	3.9	0.2
8	Market Shed	16.1	4.8	0.1	33.3	3.5	0.2	24.6	3.9	0.1
9	Water Supply	6.5	4.0	0.0	33.3	2.8	0.2	19.7	3.0	0.1
11	Electricity Supply	22.6	3.0	0.1	10.0	2.3	0.1	16.4	2.8	0.1
10	Pharmaceutical Store	35.5	3.4	0.2				18.0	3.4	0.1
14	Primary School	3.2	2.0	0.0	16.7	2.2	0.1	9.8	2.2	0.1
13	Street Light	25.8	4.8	0.1				13.1	4.8	0.1
12	Waiting Shed	19.4	6.0	0.1	10.0	4.7	0.0	14.8	5.6	0.1
15	Public Drain	12.9	4.5	0.1				6.6	4.5	0.0
16	Boat Waiting Shed	6.5	5.5	0.0	6.7	5.0	0.0	6.6	5.3	0.0
17	Retaining Wall	9.7	5.7	0.0				4.9	5.7	0.0
19	Mobile Network	6.5	3.5	0.0				3.3	3.5	0.0
18	Internet	6.5	6.5	0.0				3.3	6.5	0.0
22	Postal Service				3.3	3.0	0.0	1.6	3.0	0.0
20	Public Garbage Dump	6.5	5.0	0.0				3.3	5.0	0.0
25	Anganwadi Centre				3.3	6.0	0.0	1.6	6.0	0.0
24	Pavilion				3.3	6.0	0.0	1.6	6.0	0.0
21	Sumo Service				3.3	6.0	0.0	1.6	6.0	0.0
23	Bridge	3.2	9.0	0.0				1.6	9.0	0.0

Source: Computed

## **CHAPTER V**

## **CONCLUSION AND SUGGESTIONS**

## CHAPTER V

### CONCLUSION AND SUGGESTIONS

This chapter highlights the major findings and conclusion drawn from the previous chapter. It also presents with suggestions for policy making and social work practice.

#### 5.1. Findings

The key observation indicate that there is huge developmental gap among the different types of villages in Mizoram. The major findings are drawn from the village level and household level analysis of autonomous and non-autonomous region.

##### 5.1.1. Infrastructure and Tribal Development: Village Level Analysis

This section highlights the major findings from the village level analysis of secondary data, viz. Lawngtlai, Mamit and Lunglei districts where the households of the Chakma tribes are settled.

**Demographic profile:** The total number of villages identified are 340 (three hundred and forty) comprising of Chakma villages, Mizo villages, Bru villages and Mix villages from autonomous district and non-autonomous region. The sample results indicates that the population of Mizo households are high in both the region. The sex ratio is not much different across all the villages. Most of the Chakma villages are settled near the river/stream banks while the other villages are situated in the hilly terrain. Most of these villages depend on agricultural products as their main source of income.

**Education:** There is a vast difference between the educational development between the Mizo villages and other villages as the level of education attainment is better in the Mizo villages than all the other villages.

**Economic Condition:** Majority of the households are under the BPL category. The Chakma villages in the autonomous region have better economic opportunities compared to the non-autonomous region. Most of the households are cultivators. In this section as well the Mizo villages are moderately better than the others.

**Access to Physical Infrastructure:** The use of computer applications are non-existence in most of the village. Majority Chakma and Bru villages do not have access to electricity, LPG, Telephone, TV and vehicles while majority of Mizo villages have access to these facilities.

**Access to Water Supply and Sanitation:** In both the regions Bru and Chakma villages do not have good water supply and sanitation system while the Mizo and Mix villages are better with access to this facilities.

### **5.1.2. Infrastructure and Tribal Development: Household Level Analysis**

The section highlights the major findings from the analysis of primary data collected through field survey in two villages representing autonomous and non-autonomous regions.

**Demographic Profile:** The total sample size is 61 (sixty one), representing 31(thirty one) households from autonomous region and 30 (thirty) households from non-autonomous region. Most of the households from autonomous region possess permanent land settlement pass whereas households from non-autonomous region have land owned by the community. There is not much difference in terms of sex ratio in both the region. All the respondents follow nuclear type of family. Both the regions are located near the river banks.

**Education:** The level of education attainment is poor as 36 percent of the household members are illiterates in both the region. A small portion of them have completed higher education, i.e. 6 percent of the adult members had higher secondary education, and 9 per cent had college education level.

**Economic Condition:** Majority of the households are under BPL category in both the regions. According earners and dependents ratio, there are more dependents, i.e. 2:3 in autonomous and 1:4 in non-autonomous region. The main occupations in autonomous region are daily wage labour and government jobs whereas in non-autonomous region, cultivation is the main occupation with 64 per cent.

**Access to Physical Infrastructure:** Majority (84%) of the houses dwelled by the respondents are of Kutcha type of housing in both the regions. There is not difference in terms of access to physical infrastructure facilities. Most of the households use mobile telecommunication viz. 92 percent. The households also have access to good electric connections, LPG and television. The uses of computer application and ownership of vehicles are minimal.

**Access to Water Supply and Sanitation:** The access to water supply in autonomous region is better than the non-autonomous region where only 7 per cent have tap water connection. They mainly depend on the public water point and the river water source. The sanitation is in a deteriorated state. No houses have proper drainage system and only few of them have in-house toilet facilities.

**Availability of Physical Infrastructure:** Most of the basic physical infrastructures are available but the services and maintenances of this facilities are in a poor state. The existing physical infrastructures need to be upgraded. The quality of physical infrastructures in autonomous region is considerably better than the non-autonomous region.

**Availability of Social Infrastructure:** There is a major crisis of social infrastructure facilities in both the regions. There is no PHC or Pharmaceutical Shops so the villages are totally cut-off from basic health care. There are also no higher educational institutions and the existing schools need to be upgraded. Other existing social infrastructures need to be improved as they are in a poor state as well. The quality of social infrastructures is poor in both the region. Only Temple Monastery or Church, Water Supply, and Anganwadi Centre are in decent shape.

**Differences in Development and Infrastructure:** The autonomous region is in a better state than the non-autonomous region in terms of development and infrastructure. The education attainment and annual income are higher in the earlier region than the later.

**Important Infrastructural Needs:** It is observed that there are 12 infrastructural facilities which need immediate attention:

1. Road
2. Middle School
3. Community Hall
4. Public Toilet
5. PHC
6. Pharmaceutical Shops
7. Electric Supply
8. Street Light
9. Public Drain
10. High School
11. Market Shed
12. Waiting Shed

## **5.2. Conclusion**

Availability of adequate infrastructure facilities is an important pre-condition for sustainable economic and social development. The Chakma villages in both the autonomous district area and non-autonomous district area suffer from lack of physical and social infrastructure development. The qualities of the available physical and social infrastructures are in poor condition. Analysis of village level data on infrastructure and development in three districts of Mizoram where Chakma tribal population is settled shows that they lag behind the Mizo villages in terms of infrastructure as well as social and economic development. Low level of infrastructure access contributes to low level of occupational

diversification and educational attainment of the Chakmas. Constitutional provision of autonomy to tribal communities did not benefit the Chakmas much. Most of the Chakma villages are outside the Chakma Autonomous council area and autonomous councils lack administrative and financial powers and resources to implement infrastructure development projects or socio economic development projects. Hence, in the quality of physical and social infrastructure or economic development there is not much difference between the Chakma households and villages between the autonomous and non-autonomous regions. The two major differences in the living conditions of the Chakma households between the autonomous council area and the non-autonomous council region are that of occupational diversification and land ownership. Their occupational structure in the autonomous council area is much more diversified as compared to the non-autonomous council area. Further, those in the autonomous council area have greater proportion of land under land settlement as compared those in the non-autonomous region.

### **5.3 Suggestions**

The CADC and LADC falls within a single district jurisdiction of Lawngtlai DC which create complicacy in some of the bureaucratic functions and responsibilities. So, the autonomous region should be given financial autonomy to plan and implement its own socio-economic development. Also, there should be minimal interference from the state in the function of the CADC. In short, full decentralization in policy making process and financial management with proper accountability would enhance better socio-economic development in the autonomous region. This will give true autonomous character to the Scheduled Area.

Road and communications are the life line for any country, region or group for its overall development. The vital means for socio-economic development in the autonomous region is found to be the transportation and communication system. So, improvement of roads will give thrust to other infrastructure needs for overall development. The main mode of telecommunication is through mobile network which is poor. Therefore, available mobile tower needs a major upgradation.

Article 25 of the Universal Declaration of Human Rights (UDHR) clearly defines the individual rights to adequate standard of living, basic health care and well-being. Whereas in Mizoram, most of the rural population do not get basic health care facilities due to lack of health infrastructure facilities. Despite CADC having more than fifty thousand adult population, there is only a single Community Health Centre (CHC) with only one medical doctor and few medical staffs attaining. So, the Government must upgrade the CHC to a

Hospital and ensure better health facilities. Mobile health camp can also be feasible for remote areas.

According to the village level analysis, the main priority for infrastructural need in the non-autonomous district area is PHC (Primary Health-care Centre). The road transport is poor in this region as well but the people use water transportation system as an alternate route. Therefore, the Government can focus on this water ways instead of the road which would be cost efficient and easier. In this region as well, for telecommunication the main mode is through mobile network so improvement in the mobile tower is needed. Steps need to be taken towards providing them.

Sanitation such as public and in-house drainage system, bath room, in-house toilet, public toilet, and safe drinking water supply are the immediate needs in both region as there are only few of these facilities available and are in poor condition. Majority of the Chakma population lack basic education so establishment of more primary school, middle school, high school and other higher educational institutions are needed. On a priority basis steps need to be undertaken by the authorities.

There is a lack of confidence among the minority groups towards the Government due to uneven development patterns among the different types of villages in Mizoram. Therefore, the Government should include participatory method for planning and implementation process of any scheme or programme which would result not only into meeting the exact needs but also imbibe inclusiveness among the villages. The existing infrastructures should also be regularly maintained and updated. In-depth studies about the Sixth-Scheduled Area may bring practical results in better policy making.

Majority of the Chakma villages fall in the Indo-Bangla and Indo-Burma border, the Government can pursue developmental project in this areas under the 'Act East Policy' for socio-economic development of the region. The government can further set up skill development centers to train young people for work in the formal and informal sector in rural areas. This will not only empower the rural youths but also help in poverty alleviation.

Finally, Mizoram has the highest percentage of ST population with 98.79 percent (Census of India 2011). Therefore, the Government at Central and State level should be formulate comprehensive, specific regional and selective tribal development strategy for the promotion of the backward regions in the State of Mizoram. There is also a wide scope for various research studies on the Chakma villages of Mizoram as there are only few limited literatures available about them.



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## Socio-economic Infrastructure and Tribal Development of Chakma Settlements in Mizoram

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### Household Interview Schedule (Confidential)

**I. Identification Information**

1. Date of Interview :
2. Investigator:
3. Village:

**II. General Information:**

1.	Name of the Respondent:
2.	Religion: 1 Buddhist 2 Christian
3.	Tribe: 1 Chakma 2 Mizo 3 Mara 4 Bru
4.	Sub tribe:
5.	Clan:
6.	Type of Family: 1 Nuclear; 2 Joint
7.	Form of Family: 1 S ; 2 Broken; 3 Reconstituted
8.	Size of Family :
9.	Socio Economic Status of Household: 1 BPL, 2 APL

**III. Demographic Profile of Family Members**

Please give the demographic details of the members of your household members.

I.D.	Name	Sex	Relationship*	Age	Marital Status**	Education (Years Completed)	Respondent
1.							
2.							
3.							
4.							
5.							
6.							
7.							
8.							
9.							
10.							
11.							
12.							

\* Relationship: 0 Head; 1 Spouse, 2 Son/Daughter, 3 Parent; 4 Grand Parent; 5 Daughter in law/Son in law 6 others

\*\* Marital Status: 1 Unmarried; 2 Married; 3 Divorced/Separated 4Remarried 5 Widowed



#### IV. Economic Profile:

1. Please give details of the all members' occupation and income of your household.

I.D	Earners/Dependent	Primary Occupation	Primary Income	Secondary Occupation	Secondary Income

\*\*\* Occupation: 0 Dependent; 1 Daily Wage Labour; 2 Artisan/ Craftsman; 3 Cultivator;  
4 Skilled Private Job; 5 Petty Business; 6 Large Business; 7 Govt. Worker; 8 Govt. Officer

#### V. Housing Amenities and Facilities:

##### SL.No.

##### Questions

1. Ownership of House: 1 Rented; 2 Own
2. House Constructed under Government Scheme(specify): 0 No : 1 Yes
3. Type of House: 1 Kuchcha, 2 Semi- Pucca 3 Pucca,
4. Type of Wall: 1 Silpolin; 2 Bamboo 3 Wood; 4Tile; 5 Brick;
5. Type of Floor: 1 Mud; 2 Bamboo; 3 Wood; 4 Concrete
6. Type of Roof: 1 Hey; 2 Bamboo Leaves; 3 Tin; 4 Concrete
7. Type of House Post: 1 Bamboo 2 Wood 3 Concrete
8. No. of Rooms:
9. Approximate Square Feet:
10. Electric Connection: 0 No;1 Yes
11. Electricity Inverter: : 0 No;1 Yes
12. Telephone/Mobile: 0 No;1 Yes
13. Television: 0 No;1 Yes
14. Computer/Laptop: 0 No;1 Yes
15. Internet connection: 0 No;1 Yes
16. LP Gas Connection: 0 No;1 Yes
17. Source of Drinking Water:  
1 Stream/Spring/River 2 Open Well 3 Hand-pump  
4 Public Water Point 5 Tap Water
18. Refrigerator: 0 No;1 Yes
19. Washing Machine: 0 No;1 Yes
20. Two Wheeler: 0 No 1 Yes,
21. Four Wheeler: 0 No;1 Yes
22. Owned Boat: 0 No;1 Yes
23. Separate Kitchen: 0 No;1 Yes
24. Separate Bath Room: 0 No;1 Yes
25. Toilet Facility in House: 1
26. Drainage Facility: 0 No;1 Yes

**VI. Kindly give the details of Land Owned by your household.**

No.		No. of Plots	No. of Acres
1	Community Land		
2	Temporary Pass		
3	Periodic Land Pass		
4	Land Settlement Certificate		

**VII. Kindly Rate the Quality of Infrastructure Facilities in your village.**

No.	Infrastructure Facility	Access	Quality				
		Using	Very Good	Good	Moderate	Poor	Very Poor
1.	Anganwadi Centre	1	5	4	3	2	1
2.	Boat Services	1	5	4	3	2	1
3.	Bus Services	1	5	4	3	2	1
4.	Cable TV Network	1	5	4	3	2	1
5.	College	1	5	4	3	2	1
6.	Commercial Banks	1	5	4	3	2	1
7.	Community Hall	1	5	4	3	2	1
8.	Cooperative Banks	1	5	4	3	2	1
9.	Courier Postal Service	1	5	4	3	2	1
10.	Grocery Shops in the Village	1	5	4	3	2	1
11.	High School	1	5	4	3	2	1
12.	Higher Secondary School	1	5	4	3	2	1
13.	Internet Connectivity	1	5	4	3	2	1
14.	Landline Telephone connectivity	1	5	4	3	2	1
15.	Life Insurance	1	5	4	3	2	1
16.	Middle School	1	5	4	3	2	1
17.	Mobile telephone network	1	5	4	3	2	1
18.	Pharmaceutical Shops in the Village	1	5	4	3	2	1
19.	Indian Postal Service	1	5	4	3	2	1
20.	Primary Health Centre or Sub Centre	1	5	4	3	2	1
21.	Primary School	1	5	4	3	2	1
22.	Public Distribution System	1	5	4	3	2	1
23.	Public Drainage	1	5	4	3	2	1
24.	Road Linking Village with District HQ	1	5	4	3	2	1
25.	Roads Linking Village with Other Towns	1	5	4	3	2	1
26.	Roads Linking Village with Other Villages	1	5	4	3	2	1
27.	Roads within village	1	5	4	3	2	1
28.	Sanitation Facilities(Toilet)	1	5	4	3	2	1
29.	Sports and Games Facilities	1	5	4	3	2	1
30.	Sumo Services	1	5	4	3	2	1
31.	Supply of Electricity	1	5	4	3	2	1
32.	Supply of LP Gas	1	5	4	3	2	1
33.	Temple Monastery or Church	1	5	4	3	2	1
34.	TV Satellite Network	1	5	4	3	2	1
35.	Vege Market Sheds in the Village	1	5	4	3	2	1
36.	Water Supply	1	5	4	3	2	1
37.	Working of Street Lights	1	5	4	3	2	1

**VIII. How far do you think the infrastructure facilities in your village are adequate?**

1 Highly Inadequate; 2. Inadequate 3 Moderate 4 Adequate 5 Highly Adequate

**IX. Kindly list the infrastructure facilities lacking in your village.**

No.	Infrastructure
1.	
2.	
3.	
4.	
5.	
6.	
7.	
8.	
9.	
10.	
11.	
12.	
13.	
14.	
15.	
16.	

**X. Please list out the Consequences of inadequate infrastructure development experienced in your village.**

No.	Infrastructure
1.	
2.	
3.	
4.	
5.	
6.	
7.	
8.	

# Socio-Economic Infrastructure and Tribal Development of Chakma Settlements in Mizoram

**Research Scholar**

**Mr. Lokesh Chakma**

M.Phil Scholar

Mizoram University

**Research Supervisor**

**Prof. Kanagaraj Easwaran**

Department of Social Work

Mizoram University

**Village Schedule  
(Confidential)**

**XI. General Information:**

1. Name of village:
2. Name of the respondent:
3. Designation:

**XII. Village Profile:**

1. Year of Establishment:
2. Total No. of Households:
3. Population:

SL.No.	
1.	Main road to the village: 1 Blacktop 2 Kucchha 3 Both
2.	Mode of transportation: 1 Sumo 2 Bus 3 Boat 4 Other
3.	Bridge: 1 Yes 2 No
4.	Telephone tower: 1 Yes 2 No
5.	Landline Telephone connectivity: 1 Yes 2 No
6.	Mobile telephone network: 1 Yes 2 No
7.	Availability of power and electricity:
8.	Street Lights: 1 Yes 2 No
9.	Condition of the School infrastructure: 1 Very Good, 2 Good, 3 Moderate, 4 Poor; 5 Very Poor
10.	How far is the School from your house? 1 >1Km 2 <1Km, 3 >2Km, 4 <3Km
11.	Sources drinking water: 1 Tap Water, 2 Hand-pump, 3 Own Well, 5 Public Water Point, 6 Stream, 7 Pond
12.	How far is the nearest water source? 1 >1Km 2 <1Km, 3 >2Km, 4 <3Km
13.	Do you face water scarcity? 1 Yes 2 No
14.	Do you have a drainage system: 1 Yes 2 No
15.	Do you have access to health facilities? 1 Yes 2 No
16.	How far is the PHC from your house? 1 >1Km 2 <1Km, 3 >2Km, 4 <3Km
17.	How far is the nearest hospital? 1 >1Km 2 <1Km, 3 >2Km, 4 <3Km
18.	Do you have indigenous traditional health care facilities? 1 Yes 2 No
19.	Any of your household members registered in Anganwadi Centre? 1 Yes 2 No
20.	How far is the gas agency/shop? 1 >1Km 2 <1Km, 3 >2Km, 4 <3Km
21.	If you use fire woods. How far do you go to fetch? 1 >1Km 2 <1Km, 3 >2Km, 4 <3Km
22.	Do you have the Market sheds in your village? 1 Yes 2 No

23.	Is there any maintenance done for the market shed? 1 Yes 2 No
24.	How many Shops are there in the village?
25.	Do all the available shops in the village sufficient? 1 Yes 2 No
26.	How far is the nearest Bank from your village? 1 >1Km 2 <1Km, 3 >2Km, 4 <3Km
27.	How far is the nearest Post office from your village?

a. Total No. of Male:

b. Total No. of Female:

4. Total No. of Schools:

a. Primary

b. Middle

c. High School

d. Higher Secondary School

5. No. of Buddhist Temples:

6. No. of Churches (Specify Denominations):

7. No. of Water Reservoirs:

8. No. of Transformers:

9. No. of Anganwadi Centres:

10. No. of Playgrounds:

11. No. of Community Halls:

12. Total No. of Health Centre:

13. Total No. of Market Sheds:

14. Total No. of Transformers:

15. Main Sources of income:

**XIII. Accessibilities to Infrastructure Facilities:**

**XIV. How far do you think the infrastructure facilities in your village are adequate?**

1 Highly Inadequate; 2 Inadequate; 3 Moderate; 4 Adequate; 5 Highly Adequate

**XV. Kindly list the infrastructure facilities lacking in your village.**

No.	Infrastructure
1.	
2.	
3.	
4.	
5.	
6.	
7.	
8.	

**XVI. Please list out the Consequences of inadequate infrastructure development experienced in your village.**

<b>No.</b>	<b>Infrastructure</b>
❖	
❖	
❖	
❖	
❖	
❖	
❖	
❖	

## PARTICULARS OF THE CANDIDATE

NAME OF THE CANDIDATE	:	Lokesh Chakma
DEGREE	:	Master of Philosophy
DEPARTMENT	:	Social Work
TITLE OF DESERTATION	:	Socio-economic Infrastructure and Tribal Development in Chakma Settlements in Mizoram
DATE OF PAYMENT OF ADMISSION	:	11.08.2015
COMMENCEMENT OF SECOND SEM/DISSERTATION	:	22.02.2016
APPROVAL OF RESEARCH PROPOSAL	:	28.04.2016
1. BPGS	:	13.04.2016
2. SCHOOL BOARD	:	22.04.2016
REGISTRATION NO. & DATE	:	MZU/M.Phil./341 of 22.04.2016
DUE DATE OF SUBMISSION	:	10.02.2017
EXTENTION (IF ANY)	:	NA

(PROF. DEVENDIRAN)  
Head  
Department of Social Work  
Mizoram University  
Aizawl

## BIO-DATA

**Name** : Lokesh Chakma  
**Date of Birth** : 13<sup>th</sup> August, 1990 (as per Matriculation Certificate)  
**Father's Name** : Pulin Bayan Chakma  
**E-mail ID** : lokeshchakma@gmail.com  
**Permanent Address** : s/o Pulin Bayan Chakma, H/No.1, Kamalanagar-I,  
Chawngte-C, Lawngtlai, Pin-796730, Mizoram  
Telephone: 9436187818

### Education Qualification

Sl.No.	Class	Div	Percentage	Subject	School/University
1	X	II	54.1	Arts	MBOSE
2	XII	I	62.2	Science	CBSE
3	BA	III	45.2	Pol. Science	University of Delhi
4	MA/MSW	I	64.77	Social Work	Mizoram University

### Related Experience

- ❖ **Field work at ICDS-Rural, Tlangnuam Project:** The field work was conducted for 26 days during the first semester, MSW. The main objective was to develop professional social work skills and values and at the same time to understand and know the agency. 19 Anganwadi Centers from ICDS-Rural, Tlangnuam Project were assessed during this field work.
- ❖ **Field work at SHALOM:** The field work was conducted for 24 days during the second semester, MSW. The main objective was to develop in-depth professional social work skills and values, and apply theory into social work practice, at the same time to understand and know the agency. Contributed in ART, Counselling, Gained practical knowledge about Substance Abuse related problem in Mizoram and assisted in ART in Central jail, Aizawl.



- ❖ **Field work at Lawipu Community:** The theme of the community field work was Substance Abuse and continued from third semester to fourth semester, M.S.W. During the third semester, a detailed study of the community was made through interaction with C.B.O leaders, interaction with church leaders, Observation Visit, P.R.A, Transact walk Social Survey, case study and focused group Discussion. At the fourth semester, social work interventions were carried out on the basis of the findings during the third semester.
  
- ❖ **Field work at Lungsei Village:** For the better understanding the livelihood of the rural people, 10 days of field work was attended between 27<sup>th</sup> February- 8<sup>th</sup> march 2015 . During the Field work, the livelihood of the village people were studied through Survey Questionnaires and Participatory Rural Appraisal. Awareness programmes on piggery, Women Rights and Child Rights were conducted where resource persons were invited from different departments who were concern of the topics. Different activities were also conducted in order to build a rapport with the village people.
  
- ❖ **Carried out a Project work:** A project work on “Substance Abuse as Community Problem: Working with NGOs in Lawipu Community” was carried out. The study was descriptive in nature and also action oriented. The study used both Qualitative and Quantitative method. Collaborated with 6 Agencies during the project: CPD, MSACS, SHALOM, MSTCS, MAD&RB, and Mizoram Health Directorate.
  
- ❖ **Block Placement at Smile Foundation:** Supported Smile foundation in two projects: ‘Market Research and Business Development of Smile Foundation’ and ‘Mission Education (ME) Programme’ during the course of one month internship in 12<sup>TH</sup> January to 10<sup>th</sup> February 2015.
  
- ❖ **Attended National Seminar on ‘Research on Child Protection in North East India’:** The scholar attended a National Seminar on “Research on Child Protection in North East India”, which was organized by the Department of Social Work, Mizoram University on 16<sup>th</sup> September, 2015 (Wednesday) at Aijal Club, Aizawl Mizoram.
  
- ❖ **Participated in National Seminar on ‘Protection of Human Rights and Assuring the Unity and Integrity of the Nation’:** The Scholar Participated in a National Seminar on ‘Protection of Human Rights and Assuring the Unity and Integrity of the Nation’ organized

by National Human Rights Commission in collaboration with Mizoram University which was held on 7<sup>th</sup>-8<sup>th</sup> April, 2016.

- ❖ **Participated in a half day Workshop on ‘Human Trafficking: The North-east India Scenario’:** The Scholar Participated in a half day Workshop on ‘Human Trafficking: The North-east India Scenario’ organized by Peace Education Research Centre, Delhi on 21<sup>st</sup> January 2012.

(LOKESH CHAKMA)

Research Scholar  
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